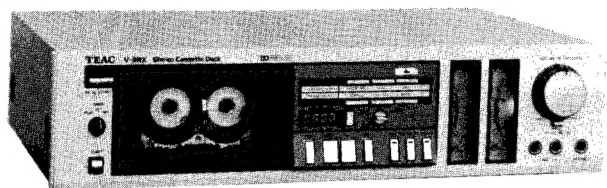


TEAC[®]



SERVICE MANUAL

V-3RX/V-5RX

Stereo Cassette Deck

1 SPECIFICATIONS AND SERVICE DATA

Notes:

1. Improvements may result in changes in specifications and service data.
2. 0 dB is referenced to 0.775 V in this manual.

SPECIFICATIONS

| | |
|-------------------------------------|---|
| Track system | 4-track, 2-channel stereo |
| Heads | 2: Erase, record/playback |
| Type of tape | Cassette tape, C-60 and C-90 (Philips type) |
| Tape speed | 4.76 cm/s (1-7/8 ips) |
| Input (level and impedance) | |
| MIC: | Specified input level: -57 dB (1.09 mV)/10 kohms Minimum input level: -67 dB (346 μ V) |
| LINE IN: | Specified input level: -9 dB (275 mV)/50 kohms Minimum input level: -19 dB (86.9 mV) |
| Output (level and impedance) | |
| OUTPUT: | Specified output level: -5 dB (436 mV)/50 kohms |
| PHONES: | Specified output level: -18 dB (97.5 mV)/8 ohms |
| Equalization | |
| METAL: | 3180 μ s + 70 μ s |
| Co (CrO₂): | 3180 μ s + 70 μ s |
| NORMAL: | 3180 μ s + 120 μ s |
| Head configuration | |
| | 1/2-track, 1-channel erase head |
| | 1/4-track, 2-channel record/playback head |
| Motors | |
| | 1 DC servo motor (for capstan drive) |
| | 1 DC motor (for reel drive) |
| | 1 DC motor (for ancillary control) |
| Bias frequency | 100 kHz \pm 5 kHz |
| Operation position | Horizontal |
| Power requirements | |
| | 100/120/220/240 V AC, 50/60 Hz, 17 W, 15 W for V-5RX (General export) |
| | 120 V AC, 60 Hz, 17 W, 15 W for V-5RX (U.S.A./Canada) |
| | 220 V AC, 50 Hz, 17 W, 15 W for V-5RX (Europe) |
| | 240 V AC, 50 Hz, 17 W, 15 W for V-5RX (U.K./Australia) |
| Weight | 6.0 kg (13-4/16 lbs.) net |
| Dimensions | See Fig. 2-2 |

SERVICE DATA

MECHANICAL

| | |
|------------------------------|--|
| Tape speed deviation | 3,000 Hz \pm 70 Hz |
| Tape speed drift | 70 Hz |
| Wow and flutter | |
| Playback: | 0.06% (WRMS) |
| Record/playback: | 0.25% (RMS) |
| Pinch roller pressure | 400 g to 490 g (14.1 oz to 17.3 oz.) |
| Reel Torque | |
| Take-up: | 50 to 65 g-cm (0.69 to 0.90 oz-inch) |
| Supply: | 1.5 to 3 g-cm (0.021 to 0.042 oz-inch) |
| F.F.: | More than 55 g-cm (0.76 oz-inch) |
| REW: | 80 to 150 g-cm (1.1 to 2.1 oz-inch) |
| Fast winding time | |
| | 85 seconds for MTT-501 (C-60) |

ELECTRICAL

| | |
|----------------------------------|---|
| Frequency response | |
| | See Figs. 5-5 and 5-7 to 5-9. |
| Signal-to-noise ratio | |
| Playback: | NORMAL: 46 dB min. |
| Overall: | METAL, Co (CrO ₂): 45 dB min. NORMAL: 44 dB min. |
| Erase efficiency | 65 dB min. at 1 kHz (measured with input 10 dB higher than the specified input level) |
| Channel separation | 30 dB min. at 1 kHz |
| Adjacent track crosstalk | 40 dB min. at 125 Hz |
| Total harmonic distortion | 2.2% or less with METAL and Co (CrO ₂) tapes 2.0% or less with NORMAL tape |

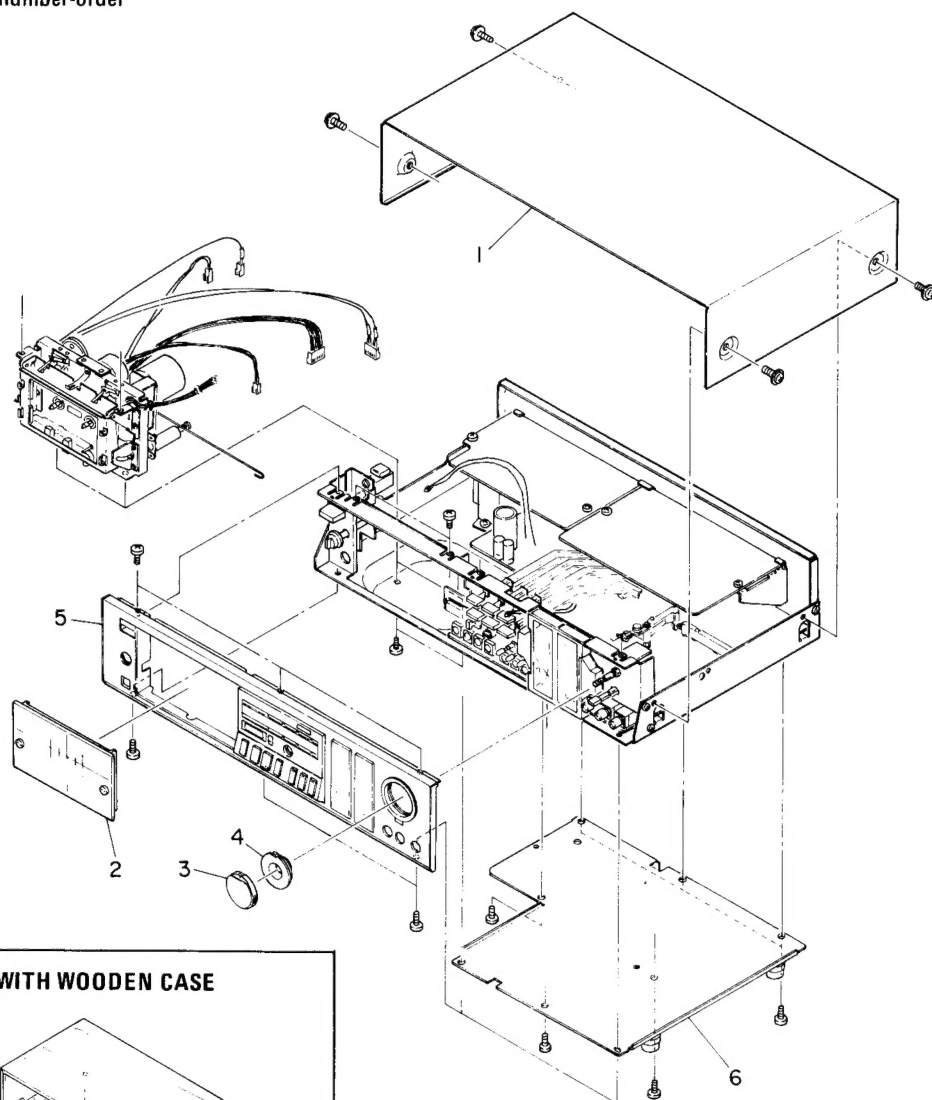
CAUTION

⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components — refer to the appropriate parts list and ensure exact replacement.

- Dolby Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
- dbx Noise Reduction System made under license from dbx, Incorporated. The name "dbx" and the dbx symbol are trademarks of dbx, Incorporated.

2 CASE AND FRONT PANEL REMOVAL

Disassemble in number-order



WITH WOODEN CASE

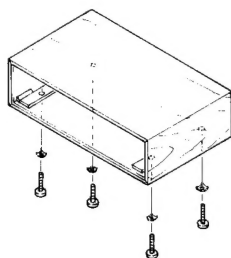
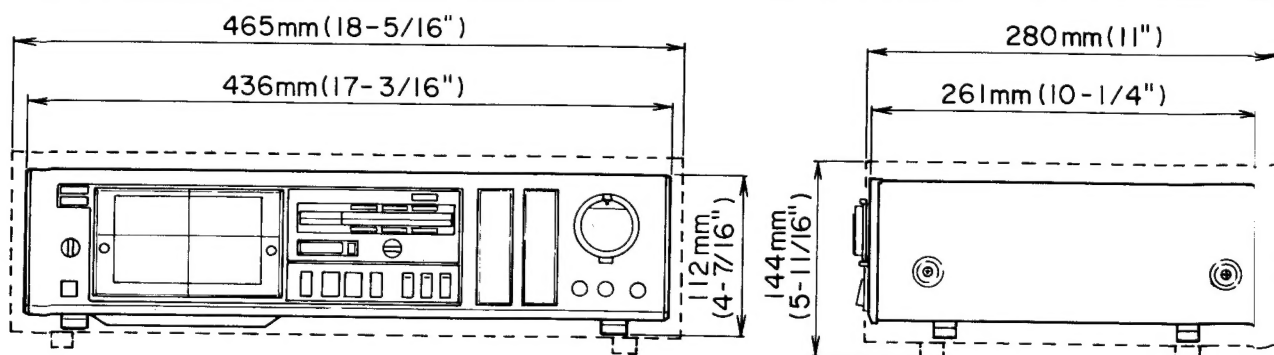


Fig. 2-1



Broken line indicates some General Export models.

Fig. 2-2 Dimensions

3 PARTS LOCATION

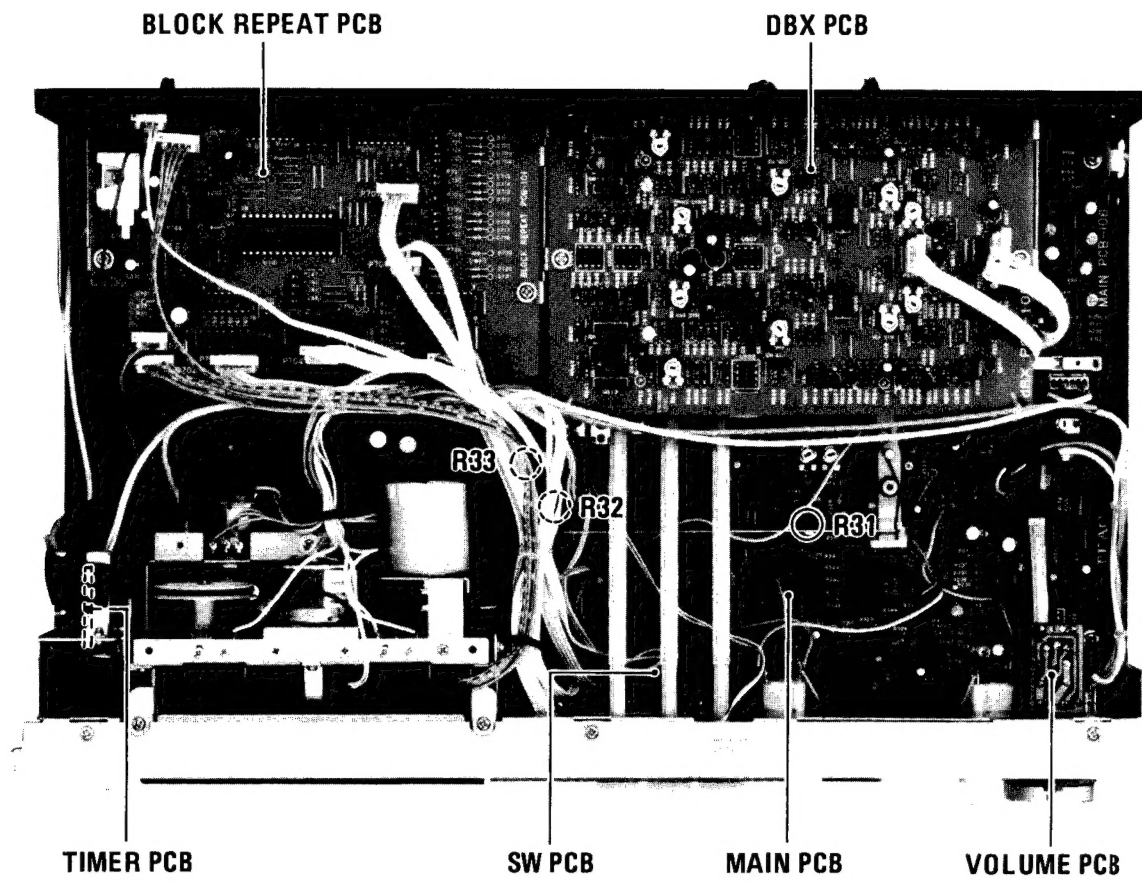


Fig. 3-1 Top view

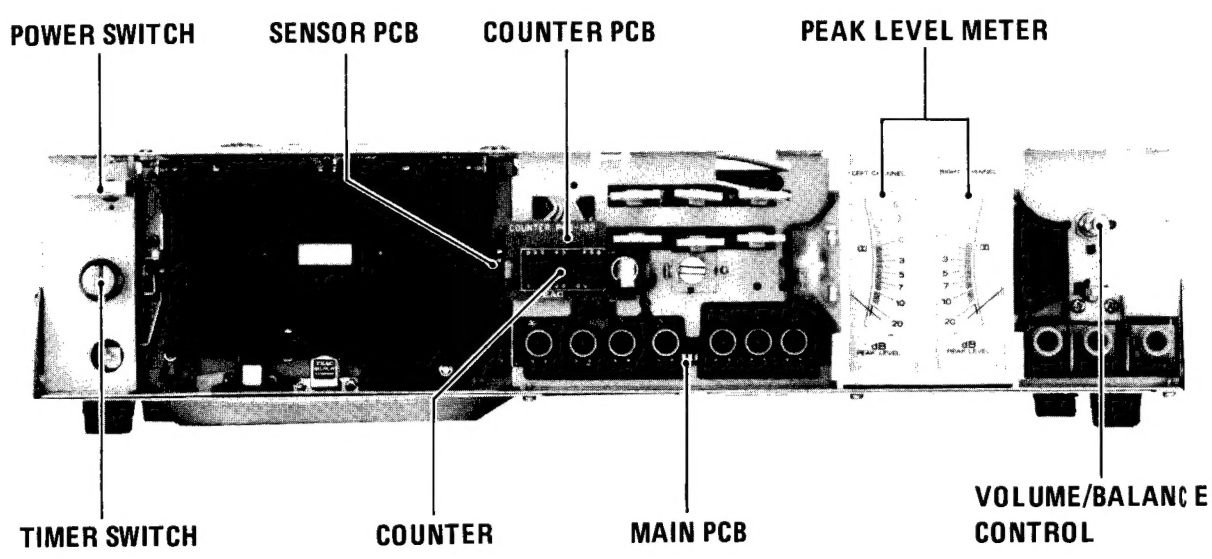
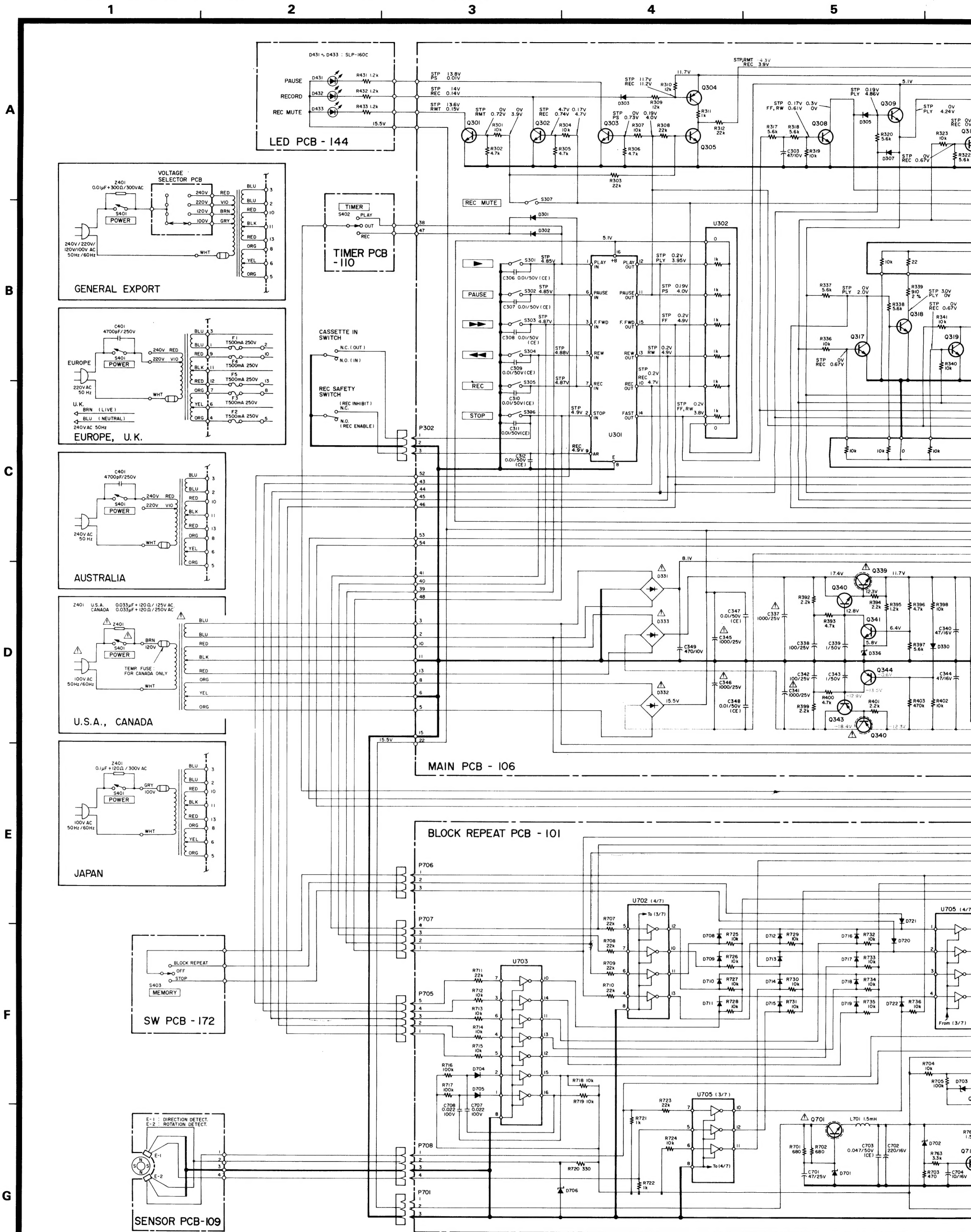






Fig. 3-2 Front view

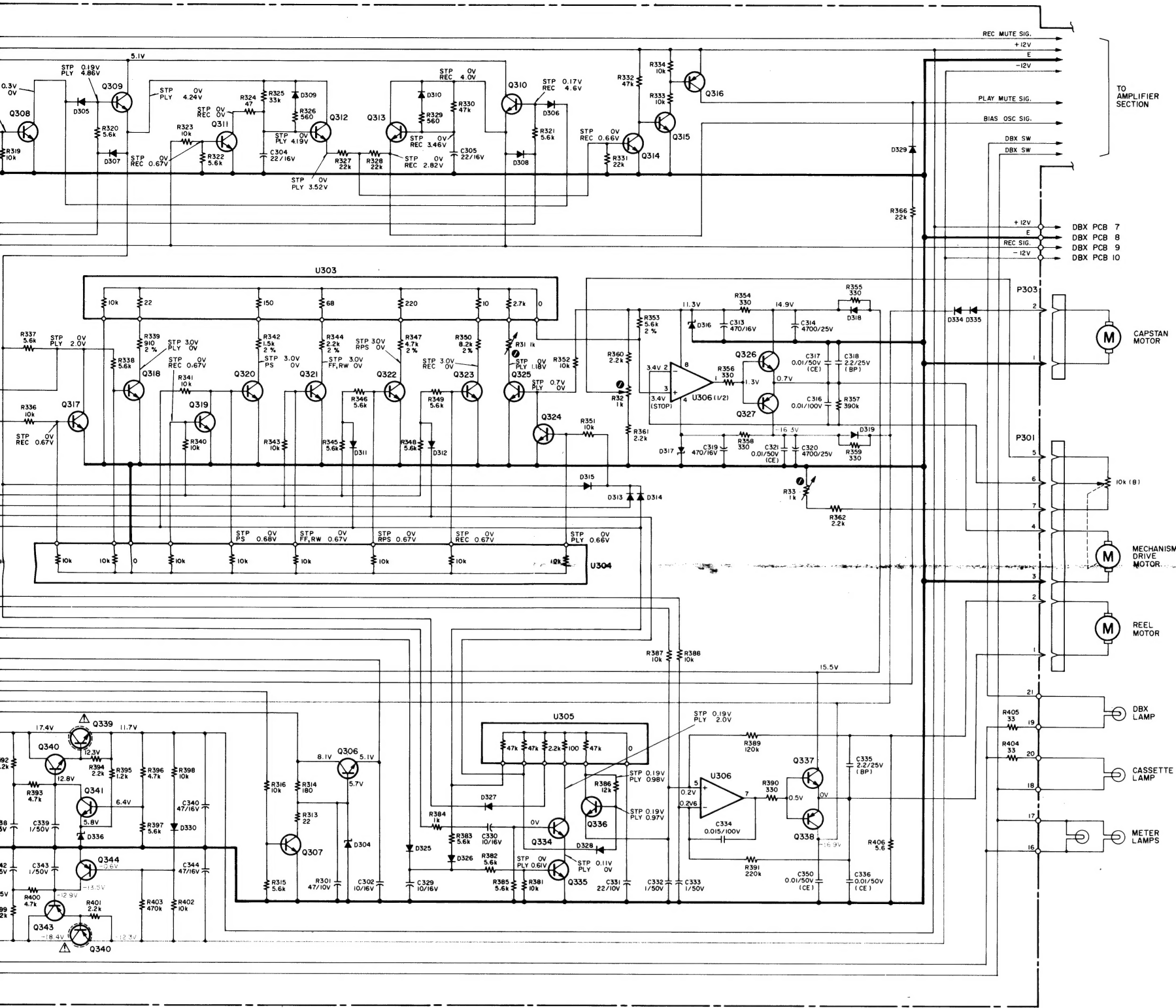
TEAC SCHEMATIC DIAGRAM (TAPE TRANSPORT) V-3RX



NOTES

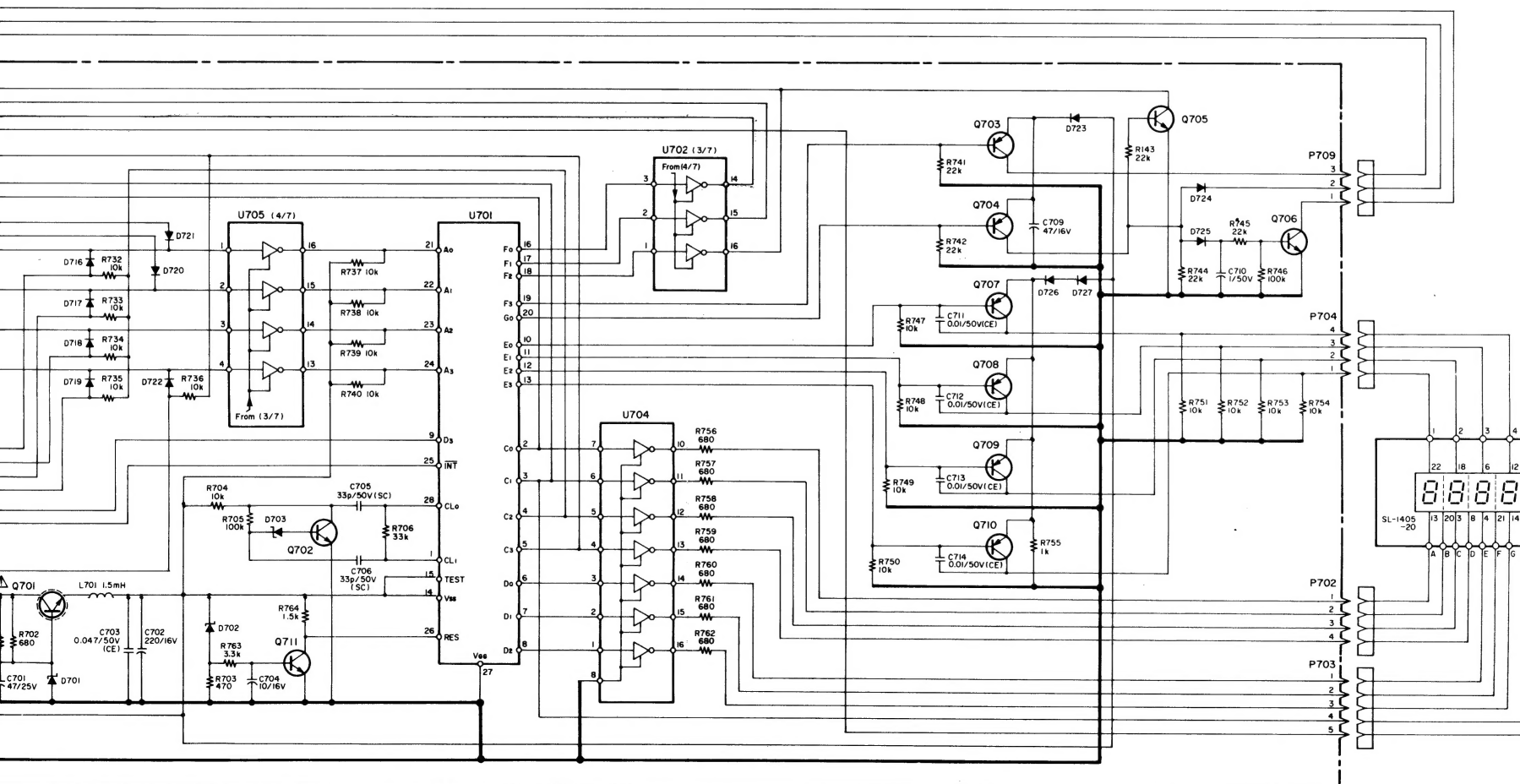
1. All resistors are ¼ watt, ±5%, unless otherwise noted.
Resistor values are in ohms (k=1,000 ohms).
2. All capacitor values are in microfarads.
(CE): Ceramic
(SC): Polystyrene
(BP): Bipolar
All non-polarized capacitors are ±5% Mylar unless otherwise noted.
3. Each voltage value shown above is the one measured in STOP position unless specified as follows.
PLY: PLAY PS: PAUSE
REC: RECORD RPS: RECPAUSE RMT: REC MUTE
FF: FAST FORWARD RW: REWIND

4.  Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer the appropriate parts list and ensure exact replacement.
5.  : Front panel indication
6.  : +B power supply circuit
7.  : -B power supply circuit



MAIN PCB-106

| | |
|-------------|------------|
| U301 | M54410P |
| U302 | 01-0186 |
| U303 | 01-0187 |
| U304 | 01-0188 |
| U305 | 01-0310 |
| U306 | μPC4557C |
| Q301 ~ Q303 | 2SC945AK |
| Q304 | 2SA1015GR |
| Q305 | 2SC945AK |
| Q306 | 2SC2655Y |
| Q307 | 2SC1741R |
| Q308 ~ Q315 | 2SC945AK |
| Q316 | 2SA1015GR |
| Q317 ~ Q325 | 2SC945AK |
| Q326 | 2SC2655Y |
| Q327 | 2SA1020Y |
| Q328 ~ Q333 | (Not used) |
| Q334 ~ Q336 | 2SC945AK |
| Q337 | 2SC2655Y |
| Q338 | 2SA1020Y |
| Q339 | 2SC313E |
| Q340, Q341 | 2SC945AK |
| Q342 | 2SB507E |
| Q343, Q344 | 2SA1015GR |
| D301 ~ D303 | IS2473HJ |
| D304 | GAZ-5.6U |
| D305 ~ D310 | IS2473HJ |
| D311, D312 | 0A90R |
| D313 ~ D315 | IS2473HJ |
| D316, D317 | GZA-11U |
| D318, D319 | IR5B261 |
| D320, D321 | (Not used) |
| D322 ~ D330 | IS2473HJ |
| D331 | DBA-10C |
| D332 | W02 |
| D333 | DBA-10C |
| D334, D335 | W03C |
| D336 | GZA-6.2L |

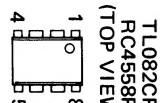
BLOCK REPEAT
PCB-101

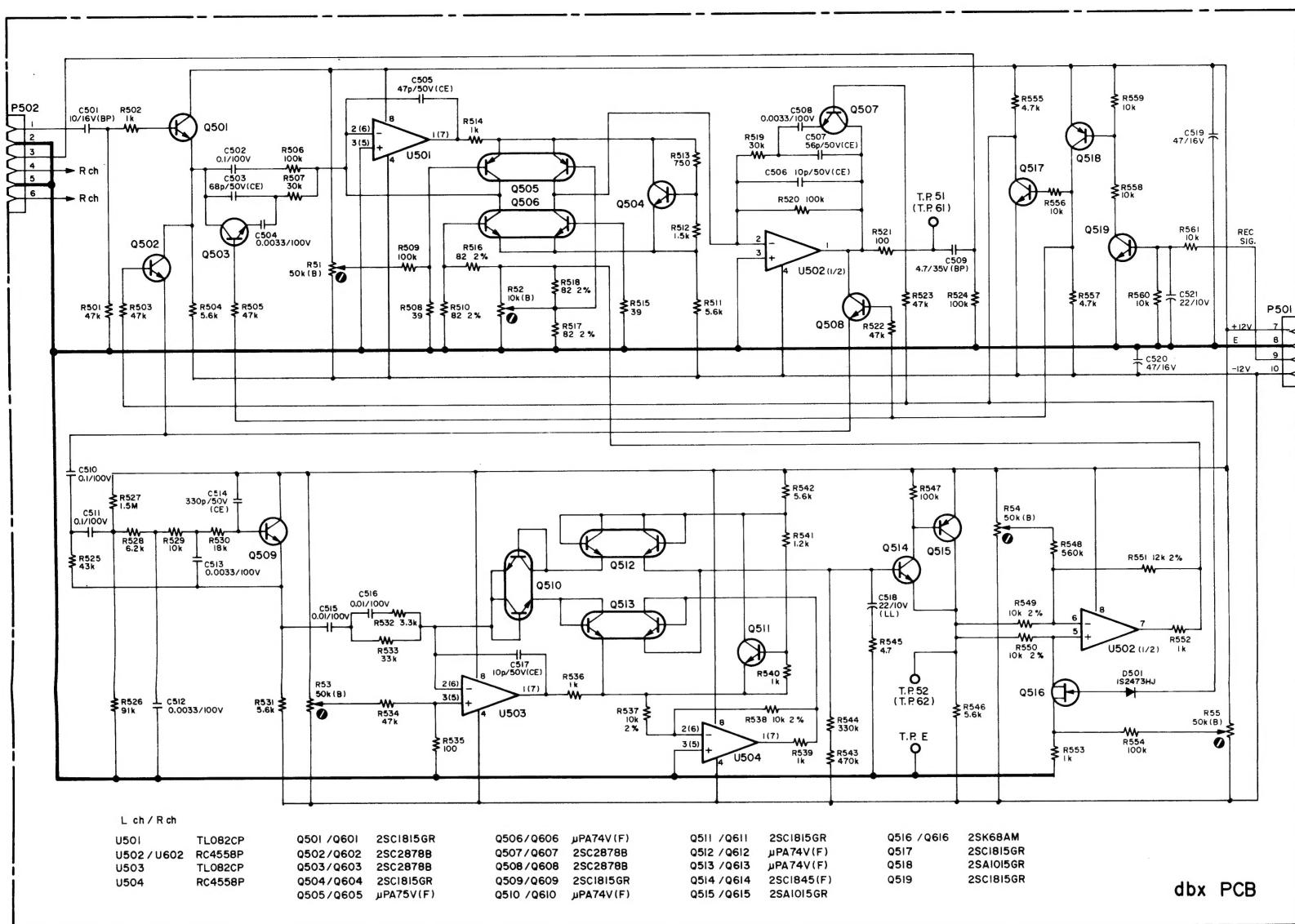
| | |
|-------------|------------|
| U701 | μPD554C |
| U702 ~ U705 | TD62504P |
| Q701 | 2SD313E |
| Q702 | 2SC945AK |
| Q703, Q704 | 2SA1015GR |
| Q705, Q706 | 2SC945AK |
| Q707 ~ Q710 | 2SA1015GR |
| Q711 | 2SC945AK |
| D701 | RD11EB2 |
| D702, D703 | RD8.2EB3 |
| D704, D705 | IS2473HJ |
| D706 | RD5.6E |
| D707 | (Not used) |
| D708 ~ D727 | IS2473HJ |

are safety critical components.
with identical components - refer to
ensure exact replacement.
on
circuit
circuit

V-3RX

Stereo Cassette Deck





NOTES

1. Schematic diagram shown for left channel unless otherwise noted. Numbers in parenthesis indicate right channel terminals.
2. All resistors are $\frac{1}{4} W$, $\pm 5\%$, unless otherwise noted. Resistor values are in ohms (k=1,000 ohms, M=1,000,000 ohms).
3. Capacitor values are in microfarads (p=picofarads).
(LL) : Electrolytic capacitor LL series
(CE) : Ceramic
(PC) : Polypro.
(BP) : Bipolar
All non-polarized capacitors are $\pm 5\%$ Mylar unless otherwise noted.

4. \triangle Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
5. Voltage and level values are for reference only.
0 dB=0.775V
6. : Front panel indication
7. : Rear panel indication
8. : +B power supply circuit
9. : -B power supply circuit

SEMICONDUCTOR ELECTRODES

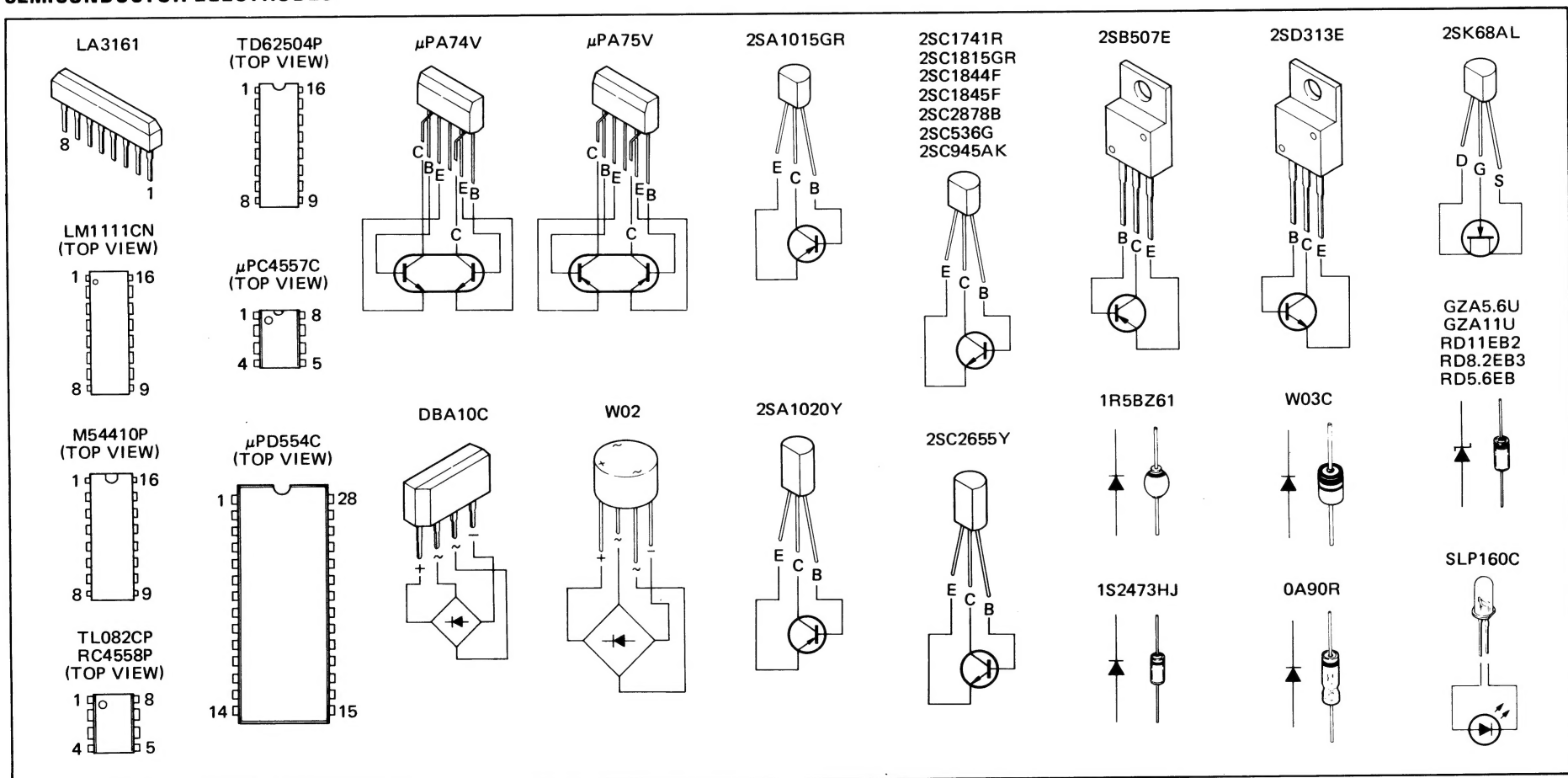




Fig. 3-3 Transport front view

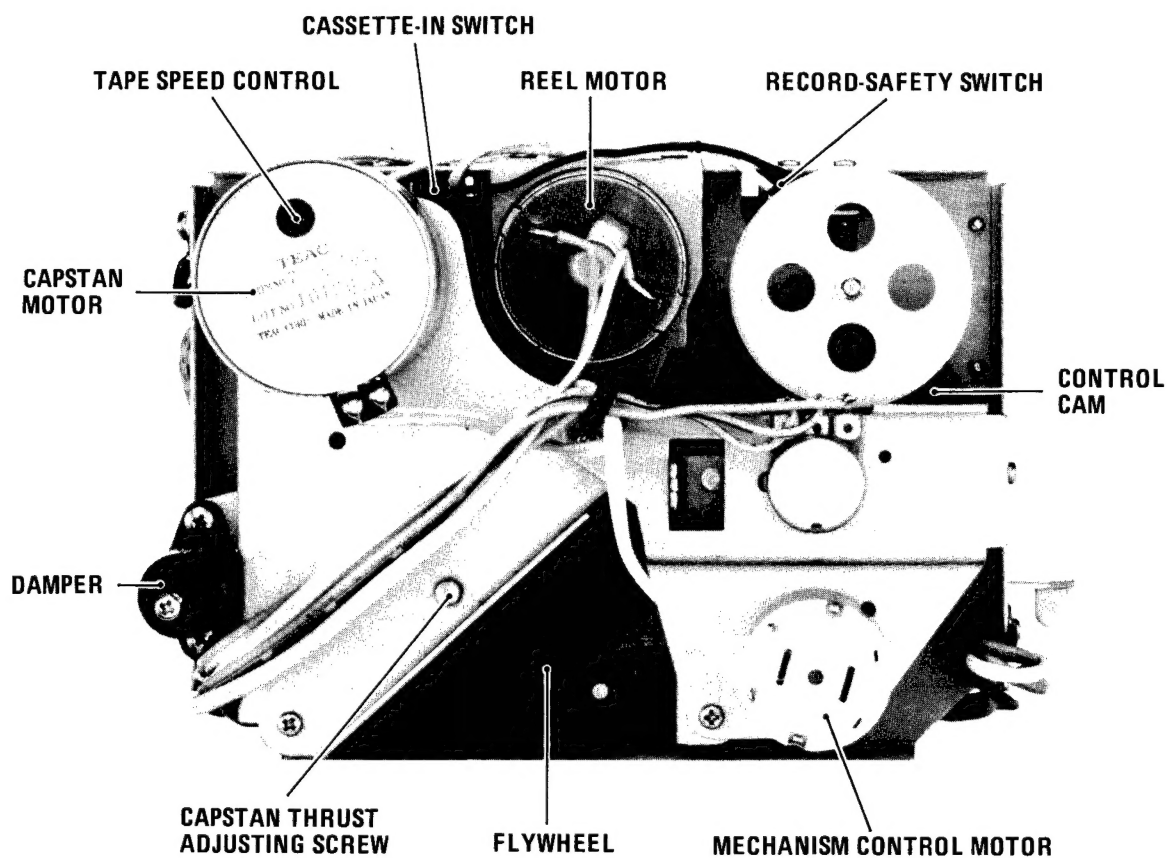


Fig. 3-4 Transport rear view

4 MECHANICAL ADJUSTMENT AND CHECKS

4-1 CAPSTAN ASSEMBLY THRUST

1. Turn the thrust adjusting screw so that thrust of the capstan shaft is from 0.1 mm to 0.2 mm. For the thrust adjusting screw location, see Fig. 3-4.

4-2 CASSETTE HOLDER

1. Adjust the holder guide plate position so that when the cassette holder in which the cassette tape is loaded is closed, the parallel condition shown in Fig. 4-1 is obtained.

Viewed from right side

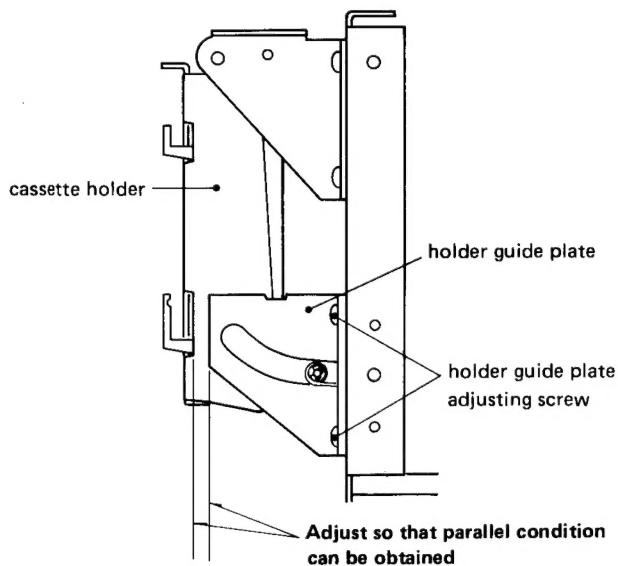


Fig. 4-1

4-3 DAMPER ADJUSTMENT

1. Load a C-60 tape and close the cassette holder.
2. Turn the air adjusting screw so that after pushing the EJECT button, the cassette holder opens completely, taking 0.5 to 1.5 seconds.

Note: Be careful not to turn the screw beyond permissible adjustment limit shown in Fig. 4-2.

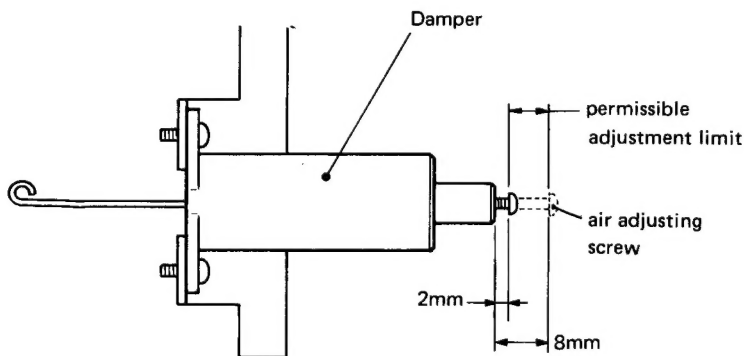


Fig. 4-2

4-4 MICRO SWITCH

1. Load any standard cassette and close the cassette holder.
2. Adjust mounting position of two micro switches, cassette-in switch and record safety switch, so that the actuator position is in the setting range shown by Fig. 4-3.

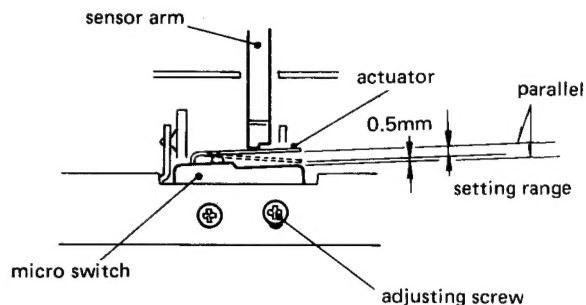


Fig. 4-3

4-5 CONTROL CAM

Note: For adjustor (R31, R32, R33) locations, see Fig. 3-1.

1. Load any cassette tape with the appropriate record-protect tab attached.
2. Push PLAY (▶) button together with REC button, then check that the center of marker ① coincides with position indicator of the reel motor mounting plate. If not, adjust by using R32.
3. After pushing STOP button, depress the PLAY button. Then check that the center of marker ⑥ agrees with the indicator. R33 is provided for this adjustment.
4. Pushing the STOP button, check that the center of marker ③ coincides with the indicator as shown in Fig. 4-4. R31 is for this adjustment.
5. Check that when in REC/PAUSE mode the indicator is within range of marker ②.
6. In the same way as above, check the following.
F. FWD and REW modes: marker ④.
PLAY/PAUSE mode: marker ⑤.

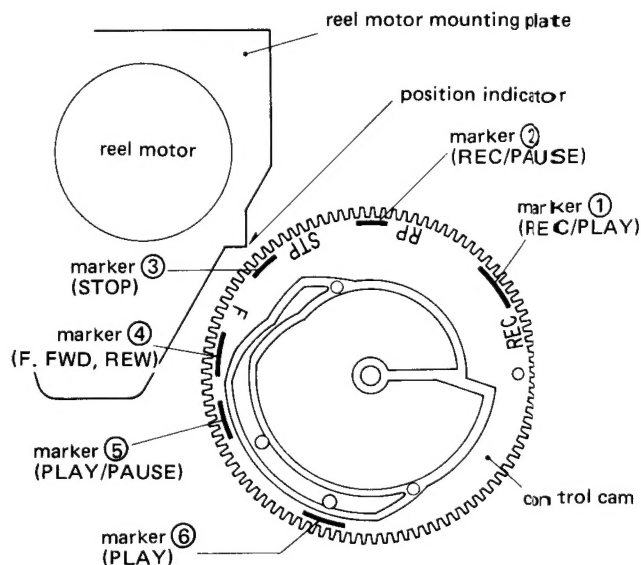


Fig. 4-4 Control cam positioning

4-6 PINCH ROLLER PRESSURE

1. With the cassette holder shut and no tape loaded, put the deck in play mode after pushing the cassette-in switch sensor arm upwards and holding it.
2. Hook a spring scale on the pinch roller assembly, as shown in the illustration.
3. Pull the scale down until there is sufficient force to separate the pinch roller from the capstan shaft.
4. Ease pressure until the pinch roller makes just enough contact with the capstan shaft so that the pinch roller just begins to turn. At this point, note the reading on the scale. It should be from 400 g to 490 g (14.1 oz. to 17.3 oz.)

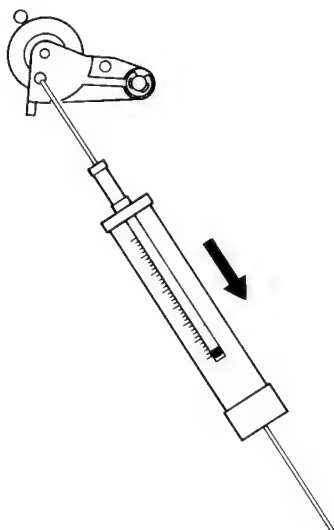


Fig. 4-5

4-7 REEL TORQUE

1. Load the cassette torque meter on the deck and read the pointer indication on the dial scale for each tape transport operation. The measured torque should be within the following values:
 Take-up: 50 to 65 g-cm (0.69 to 0.90 oz-inch)
 Supply: 1.5 to 3 g-cm (0.021 to 0.042 oz-inch)
 F.F.: More than 55 g-cm (0.76 oz-inch)
 REW: 80 to 150 g-cm (1.1 to 2.1 oz-inch)
2. Take-up torque may be adjusted if required. Within the take-up reel table you will notice three small "teeth" located at 120° around the hub and one marker "tooth" on the periphery. Torque is adjusted by pushing and slightly lifting the "tooth" (A) on the ramp* near the marker up or down. The ramps are like a three step stairway. Maximum torque is when the teeth sit on the highest steps.

* This ramp has catches on each step.

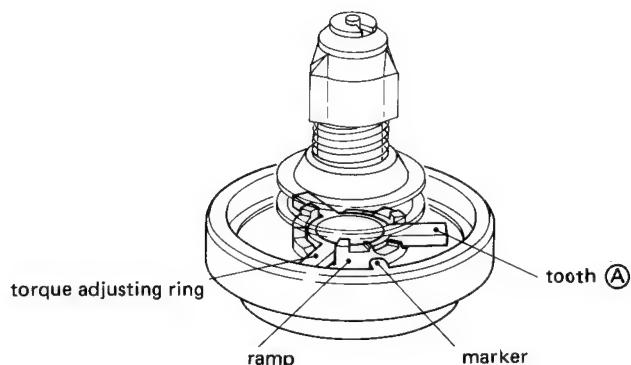


Fig. 4-6 Take-up reel table

4-8 TAPE SPEED

1. Connect a frequency counter to the deck as shown in Fig. 4-7.
2. Play a tape for more than five minutes to warm up the deck, then load a TEAC MTT-111 test tape containing a 3000-Hz test tone and play the test tape from the beginning.
3. While the tape is playing, use a common slotted screwdriver with the handle completely insulated from the blade, and adjust the control on the capstan motor (see Fig. 3-4) for a reading of 3015 to 3025 Hz on the frequency counter.
4. Play the tape at the beginning and at the end, and check that the speed deviation is within the prescribed limits by observing that the reading on the frequency counter never deviates more than ± 70 Hz from 3000 Hz, nor drifts more than 70 Hz at any given time.

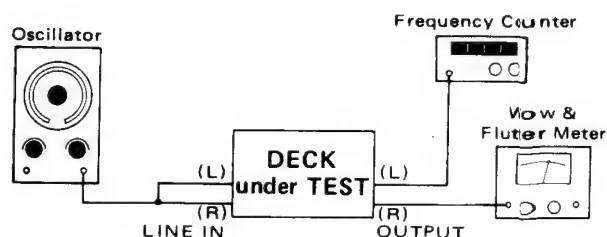


Fig. 4-7

4-9 WOW AND FLUTTER

Note: These measurements should be made at the beginning, middle, and the end of the tape.

- 1) **PLAYBACK**
 1. Connect a wow-and-flutter meter to the deck as shown in Fig. 4-7.
 2. Load and play a TEAC MTT-111 test tape.
 3. Check that the reading on the wow-and-flutter meter is within 0.06% (WRMS).
- 2) **RECORD/PLAYBACK**
 4. Load a TEAC MTT-501 test tape (blank) and record a 3000-Hz signal.
 5. Rewind the tape to the beginning of the recorded section, and play it.
 6. The wow and flutter should not be more than 0.25% (WRMS).

4-10 SENSOR PCB ASSEMBLY

- 1. Adjust by moving the SENSOR PCB assembly so that the clearance shown in Fig. 4-8 is 0.3 ~ 0.5 mm.
- 2. Be careful not to change only the position of the HALL IC when making this adjustment.

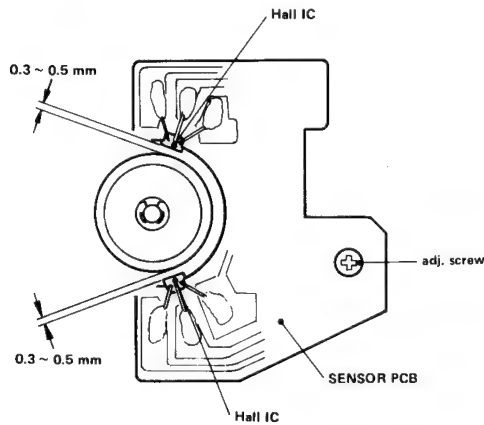


Fig. 4-8

4-11 LUBRICATION

Lubrication is only required when parts are replaced. For this purpose, use the oil and grease specified below.

Oil: TEAC spindle oil (from TEAC TZ-255 oil kit), Mobil D.T.E. Oil Light, or equivalent

Grease: ORE-LUBE G1/3 or equivalent

- 1. Apply a drop of oil with an oil applicator to a point about 1/3 the way down the shaft (from the free end) of the flywheel, then insert the shaft into the capstan housing.
- 2. Apply a suitable amount of light grease to the well of the flywheel bearing.

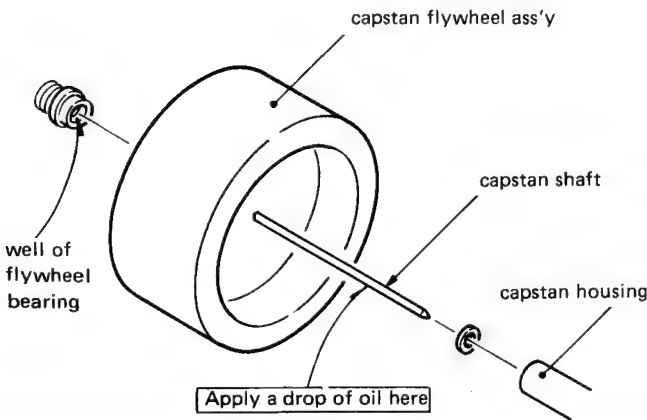


Fig. 4-9

4-12 VOLTAGE SELECTION (FOR GENERAL EXPORT MODELS)

- 1. Always disconnect the power line cord before making these adjustments.
- 2. Remove the top cover of the deck by removing the screws from the sides.
- 3. Locate the voltage selector, shown in the illustration (near the power transformer).
- 4. Loosen the two screws in the jumper bar and move the bar so that it jumps the opposing terminals marked with the required voltage (100, 120, 220 or 240).
- 5. Retighten the screws and replace the top cover.

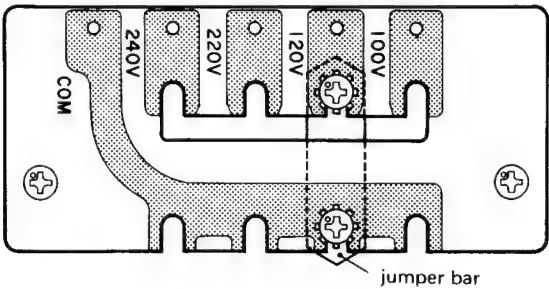


Fig. 4-10

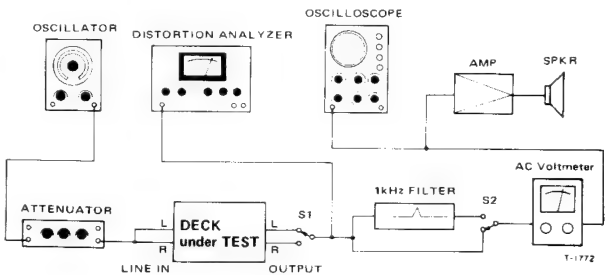


Fig. 5-1 Basic test setup

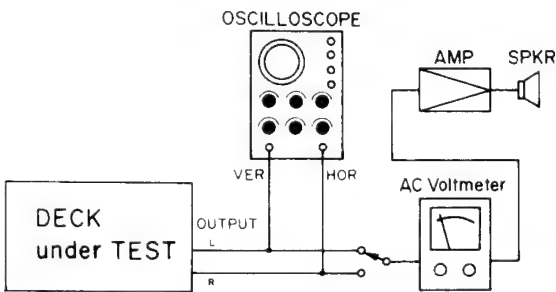


Fig. 5-2 Test setup for azimuth check

5 ELECTRICAL ADJUSTMENT AND CHECKS

PRECAUTIONS

- Before performing adjustments and checks, clean and demagnetize the entire tape path.
- Make sure the deck is properly set for the voltage in your locality.
- In general, adjustments and checks are made in the order of L-ch then R-ch. Double REF. Nos. and test point designations indicate L-ch/R-ch. (Example: R11/R21)
- 0 dB is referenced to 0.775 V. If an AC voltmeter that references 0 dB to 1 V is used, appropriate compensation should be made.
- The AC voltmeter used in the procedures must have an input impedance of 1M-ohms or more.
- Note the "Deck settings" at the top of each chart. The settings apply to all checks for a specific chart unless explicitly stated otherwise.

5-1 PLAYBACK PERFORMANCE

Deck settings:
NR SYSTEM sw: OUT
TAPE (BIAS/EQ) sw: METAL

TEAC test tapes:
MTT-150: For Dolby level calibration
MTT-316: For playback frequency response
check for METAL, Co (CrO₂)
MTT-501: For S/N check with NORMAL

| ITEM | SETTING | INPUT SIGNAL | ADJUST (or CHECK) | MEASURING POINT: RESULT | REMARKS |
|---------------------------|---|--|-------------------------------------|--|---|
| 1. REC/PLAY head azimuth | Connection: Fig. 5-2 | MTT-150 | Check | OUTPUT: Phase: within 45° | Refer to Fig. 5-4 |
| | | MTT-316 (10 kHz) | Azimuth nut of R/P heads (Fig. 5-3) | OUTPUT: Max. output at L- & R-ch's (on VTVM) | |
| 2. Specified output level | — | MTT-150 | R11/R21 | TP11/TP21 580 mV (−2.5 dB) | |
| | — | MTT-150 | Check | OUTPUT: −5 dB ±1 dB (388 to 489 mV) | Spec. output level |
| 3. PEAK LEVEL METER | — | MTT-150 | R15/R25 | PEAK LEVEL meter: 0 dB | |
| 4. Frequency response | TAPE sw: METAL If 10 kHz output is lower than spec., cut R106 and/or R206 on MAIN PCB. | MTT-316 | Check (R106/R206) | OUTPUT: Fig. 5-5 | See Fig. 5-16 for resistor location |
| | TAPE sw: NORMAL | MTT-316 | Check | OUTPUT: At 10 kHz should be approx. 4 dB higher than measured in above step. | |
| 5. Signal-to-noise ratio | TAPE sw: NORMAL | Fully-erased tape: (Use bulk tape eraser) | Check | OUTPUT: 46 dB min. | Ratio of spec. output to −5 dB to noise |

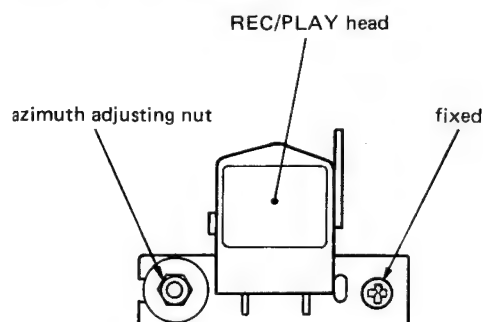


Fig. 5-3 Azimuth nut location

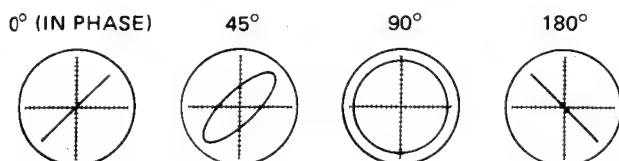


Fig. 5-4 Confirming phase relationship

EQ: METAL
TAPE: MTT-316

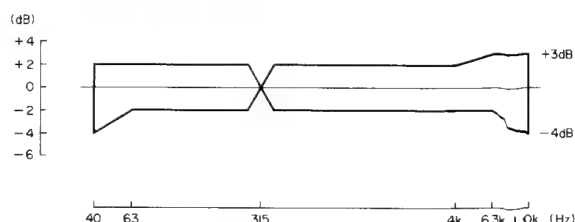


Fig. 5-5 Playback frequency response

5-2 MONITOR PERFORMANCE

Deck settings:
REC-PAUSE mode
NR SYSTEM sw.: OUT
INPUT sw.: LINE
BALANCE cont.: Center Position

| ITEM | SETTING | | INPUT SIGNAL | ADJUST (or CHECK) | MEASURING POINT: RESULT | REMARKS |
|----------------------------------|---|--------------------|--|-----------------------------|---|--|
| 6. Min. input level | RECORD cont.: Max. | INPUT sw.: MIC | MIC: 400 Hz/−67 dB (346 μV) | Check | OUTPUT: −5 dB ±3 dB (308 to 615 mV) | MIC min. input level |
| | | INPUT sw.: MIC | DIN IN: 400 Hz/−45 dB (4.36 mV) | Check | OUTPUT: −5 dB ±3 dB (308 to 615 mV) | DIN min. input level (For European models) |
| | | INPUT sw.: LINE | LINE IN: 400 Hz/−19 dB (86.9 mV) | Check | OUTPUT: −5 dB ±3 dB (308 to 615 mV) | LINE min. input level |
| 7. Specified LINE input level | — | | LINE IN: 400 Hz/−9 dB (275 mV) | VOLUME cont. | TP11/TP21 580 mV (−2.5 dB) | Specified setting of VOLUME cont. |
| | — | | LINE IN: 400 Hz/−9 dB (275 mV) | Check | OUTPUT: −5 dB ±1 dB (388 to 489 mV) | |
| | If OUTPUT level difference between L- & R-ch is 1 dB or more, cut R144/R244 on the lower reading ch. | | | Fixed resistor R144/R244 | OUTPUT: 1 dB or less differ- ence between L- & R-ch. | See Fig. 5-16 for resistor location |
| | IMPORTANT: Do not change the setting of the VOLUME control after establishing the setting as above. | | | | | |
| 8. PEAK LEVEL meter | — | | LINE IN: 400 Hz/−9 dB (275 mV) | Check | PEAK LEVEL meter: 0 dB ±1 dB | |
| 9. PHONES output level | Conn. — Fig. 5-6 | | LINE IN: 400 Hz/−9 dB (275 mV) | Check | PHONES: −18 dB ±3 dB (69.0 mV ~ 138 mV) | |

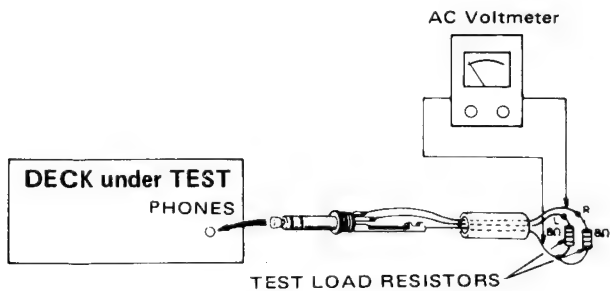


Fig. 5-6 Test setup for PHONES check

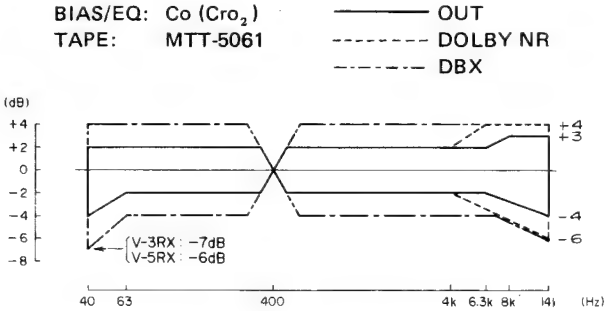


Fig. 5-8 Overall frequency response [Co (CrO₂)]

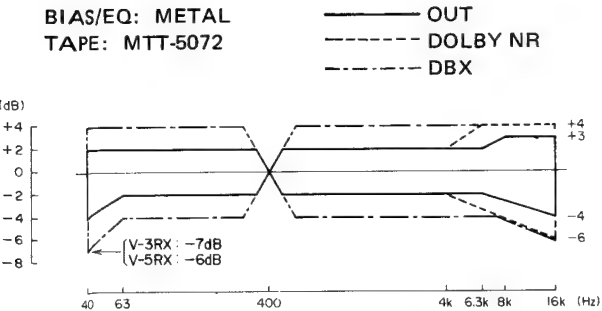


Fig. 5-7 Overall frequency response [METAL]

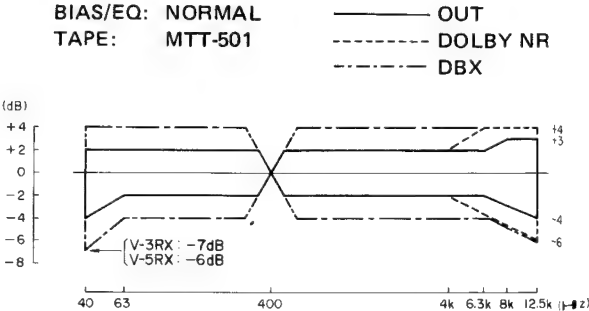


Fig. 5-9 Overall frequency response [NORMAL]

5-3 RECORDING PERFORMANCE

DECK settings:

NR SYSTEM sw.: OUT
 INPUT sw.: LINE
 VOLUME cont.: Specified position (item 7)
 BALANCE cont.: Center position

TEAC test tapes:

MTT-5061: For record test with Co (CrO₂)
 MTT-501: For record test with NORMAL
 MTT-5072: For record test with METAL

| ITEM | SETTING | INPUT SIGNAL | ADJUST (or CHECK) | MEASURING POINT: RESULT | REMARKS |
|-------------------------------|---|---|----------------------|---|--|
| 10. BIAS trap | Record-pause mode | LINE IN: No signal | U106/U206 | TP12/TP22 Min. reading | |
| 11. Record bias | 1) Turn trim pots R13 and R14 fully clockwise for each trim pot to have minimum value. Then adjust in the order of steps (2) (3) (4). | | | | |
| | 2) TAPE sw.: METAL Tape: MTT-5072 | LINE IN: 400Hz & 6.3 kHz alternately/-42 dB (6.15 mV) | C141/C241 | OUTPUT: Nearly equal level at both frequencies | |
| | 3) TAPE sw.: Co (CrO ₂) Tape: MTT-5061 | LINE IN: 400 Hz & 6.3 kHz alternately/-42 dB (6.15 mV) | R14..... | OUTPUT: Nearly equal level at both frequencies | ... For L- & R-ch |
| | 4) TAPE sw.: NORMAL Tape: MTT-501 | LINE IN: 400 Hz & 6.3 kHz alternately/-42 dB (6.15 mV) | R13..... | OUTPUT: Nearly equal level at both frequencies | ... For L- & R-ch |
| 12. Record level | TAPE sw.: METAL Tape: MTT-5072 | LINE IN: 400 Hz/-12 dB (195 mV) | R12/R22 | OUTPUT: -8 dB (308 mV) | |
| | TAPE sw.: Co(CrO ₂) Tape: MTT-5061 | LINE IN: 400 Hz/-12 dB (195 mV) | Check | OUTPUT: -8 dB ±1.5 dB (259 to 367 mV) | |
| | TAPE sw.: NORMAL Tape: MTT-501 | LINE IN: 400 Hz/-12 dB (195 mV) | Check | OUTPUT: -8 dB ±1.5 dB (259 to 367 mV) | |
| 13. Total harmonic distortion | Same as 12 above. | LINE IN: 400 Hz/-12 dB (195 mV) | Check | OUTPUT: 2.2% or less with METAL, Co(CrO ₂) 2.0% or less with NORMAL | |
| 14. Frequency response | TAPE sw.: METAL Tape MTT-5072 | LINE IN: Required signal/ -42 dB (6.15 mV) | L101/L201 | OUTPUT: Fig. 5-7 | |
| | TAPE sw.: Co(CrO ₂) Tape: MTT-5061 | LINE IN: Required signal/ -42 dB (6.15 mV) | | OUTPUT: Fig. 5-8 | |
| | TAPE sw.: NORMAL Tape: MTT-501 | LINE IN: Required signal/ -42 dB (6.15 mV) | | OUTPUT: Fig. 5-9 | |
| | If frequency response is out of specification, recheck #11. "Record bias". | | | | |
| 15. Signal-to-noise ratio | TAPE sw.: METAL Tape: MTT-5072 | LINE IN: 1 kHz/-9 dB (275 mV) ↓ no signal | Check | OUTPUT: 45 dB min. | Ratio of specified output of -5 dB to noise |
| | TAPE sw.: Co(CrO ₂) Tape: MTT5061 | LINE IN: 1 kHz/-9 dB (275 mV) ↓ no signal | Check | OUTPUT: 45 dB min. | |
| | TAPE sw.: NORMAL Tape: MTT-501 | LINE IN: 1 kHz/-9 dB (275 mV) ↓ no signal | Check | OUTPUT: 44 dB min. | |

| ITEM | SETTING | INPUT SIGNAL | ADJUST (or CHECK) | MEASURING POINT: RESULT | REMARKS |
|---------------------------------|---|---|----------------------|--------------------------------------|---|
| 16. Erase efficiency | <ul style="list-style-type: none"> • Connection is same as in Fig. 5-1, but engage 1-kHz filter. • Record a 1-kHz signal. Rewind tape to midpoint of recorded portion. Record a "no signal" portion. Find the difference between the 1-kHz portion and the "no-signal" portion. | | | | |
| | TAPE sw.: METAL Tape: MTT-5072 | LINE IN: 1 kHz/+1 dB (0.869 V) ↓ no signal | Check | OUTPUT: 65 dB min. ratio | Ref. output level: +5 dB (1.38 V) |
| 17. REC MUTE function | <ul style="list-style-type: none"> • Connection: Fig. 5-1, but engage 1-kHz filter. • Record a 1-kHz signal. Push REC MUTE button for several seconds. (At this time, make sure LED on the button lights). Rewind and play the tape. Find the difference between the 1-kHz portion and the "no-signal" portion. | | | | |
| | TAPE sw.: Co(CrO ₂) Tape: MTT-5061 | LINE IN: 1 kHz/+1 dB (0.869 V) ↓ no signal | Check | OUTPUT: 65 dB min. ratio | Ref. output level: +5 dB (1.38 V) |
| 18. Channel separation | <ul style="list-style-type: none"> • Connection Fig. 5-1, but do not connect LINE IN (R), and engage 1-kHz filter. • Set the deck to record mode. Find the difference between the 1-kHz recorded portion (L-ch) and the "no signal" portion (R-ch). | | | | |
| | TAPE sw.: Co(CrO ₂) Tape: MTT-5061 | LINE IN: L-ch 1 kHz/−9 dB (275 mV) R-ch No signal | Check | OUTPUT: 30 dB min. ratio | |
| 19. Adjacent track crosstalk | <ul style="list-style-type: none"> • Connection: Fig. 5-1, but do not connect LINE IN (L) and OUTPUT (L). • Record a 125-Hz signal on R-ch and note output level. Invert tape and play R-ch track. Check leakage level against the output reference of previously recorded portion. | | | | |
| | TAPE sw.: Co(CrO ₂) Tape: MTT-5061 | LINE IN: L-ch No signal R-ch 125 Hz/−9 dB (275 mV) | Check | OUTPUT: 40 dB min. ratio | |
| 20. DOLBY NR effect | <ul style="list-style-type: none"> • Record a 1-kHz signal with NR SYSTEM switch OUT. Play this portion with NR SYSTEM switch set to OUT and set to DOLBY NR. Obtain the difference in output level between OUT and DOLBY NR positions. Repeat the above process using a 10-kHz signal. | | | | |
| | TAPE sw.: Co(CrO ₂) Tape: MTT-5061 | LINE IN: 1 kHz/−32 dB (19.5 mV) | Check | OUTPUT: Variation 3 dB ~ 8 dB | |
| | TAPE sw.: Co(CrO ₂) Tape: MTT-5061 | LINE IN: 10 kHz/−42 dB (6.15 mV) | Check | OUTPUT: Variation 8 dB ~ 12 dB | |

5.4 DBX PERFORMANCE

Note: Test this performance only after you are sure that the "5.5 dbx PCB ADJUSTMENT" is correct.

Deck settings:

NR SYSTEM sw.: DBX
INPUT sw.: LINE
VOLUME cont.: Specified position (item 7)
BALANCE cont.: Center position

TEAC test tapes:

MTT-5061: For record test with Co (CrO₂)
MTT-501: For record test with NORMAL
MTT-5072: For record test with METAL

| ITEM | SETTING | | INPUT SIGNAL | ADJUST (or CHECK) | MEASURING POINT: RESULT | REMARKS |
|--|--|-------------------|---|----------------------|---|--|
| 21. Encoding level setting | REC/PAUSE mode | | LINE IN: 1 kHz/−9 dB (275 mV) | Check | Term. 1(6) on dbx PCB: −2.5 dB (580 mV) | |
| | If, in the above step, the RESULT is out of specification, correct using the VOLUME control so that the correct value is obtained when the control is in the specified position (item 7). | | | | | |
| | REC/PAUSE mode | | LINE IN: 1 kHz/−14.5 dB (146 mV) | R54/R64 | TP51/TP61 on dbx PCB: −8 dB (308 mV)..... | Reference 1 |
| 22. Encoder operation check (level) | REC/PAUSE mode | | LINE IN: 1 kHz/−74.5 dB (146 μV) | Check | TP51/TP61 on dbx PCB: −30 dB ±0.5 dB variation from Ref. 1 | |
| | | | LINE IN: 1 kHz/+5.5 dB (1.46 V) | | TP51/TP61 on dbx PCB: +10 dB variation from Ref. 1 | |
| 23. Encoder operation check (frequency) | REC/PAUSE mode | | LINE IN: 100 Hz/−14.5 dB (146 mV) | Check | TP51/TP61 on dbx PCB: +0.5 dB ±1 dB devia- tion from Ref. 1 | |
| | | | LINE IN: 10 kHz/−14.5 dB | | TP51/TP61 on dbx PCB: −2.8 dB ±1 dB devia- tion from Ref. 1 | |
| 24. Decoding level setting | ● Record a 1 kHz signal with NR SYSTEM switch OUT. Rewind and play the recorded portion. Note the off-the-tape level from OUTPUT (1). Repeat the above process with NR SYSTEM switch set to "DBX". Note the off-the-tape level (2). Compare the difference between (1) and (2). If ±1 dB or more, correct by R55/R65 using (1) as Reference. | | | | | |
| | REC/PLAY mode BIAS/EQ: METAL Tape: MTT- 5072 | NR SYSTEM: OUT | LINE IN: 1 kHz/−14.5 dB (146 mV) | Check | OUTPUT: Note the off-the-tape level..... | Reference2 |
| | | NR SYSTEM: DBX | LINE IN: 1 kHz/−14.5 dB | Check (R55/R65) | OUTPUT: ±1 dB from Ref. 2 | |
| 25. Distortion | REC/PLAY mode Measure the off-the-tape level [BIAS, EQ: METAL Tape: MTT-5072 [BIAS, EQ: Co (CrO ₂) Tape: MTT-5061 [BIAS, EQ: NORMAL Tape: MTT-501 | | LINE IN: 400 Hz/−12 dB (195 mV) | Check | OUTPUT: 1.5% or less | |
| 26. Signal-to-noise ratio | Same as above | | LINE IN: 1 kHz/−9 dB (275 mV) ↓ No signal | Check | OUTPUT: 65 dB min. ratio | Ratio of 1 kHz output (−5 dB) to noise |

5-5 DBX PCB ADJUSTMENT

Notes:

1. This section adjustment is not usually needed unless any of adjustor(s) have been changed or any component(s) on the PCB have sustained damage, since the dbx PCB assembly has been precisely adjusted in the factory.
2. For this section adjustment, it is necessary to disconnect the wires from terminals 1, 3, 4, and 6 of the connector P502 on the dbx PCB. Turn the deck OFF to prevent accidental damage when disconnecting or reconnecting.
3. Simply press the POWER switch to ON (all other switches and controls on the deck have no effect on this adjustment), then make this section adjustment.

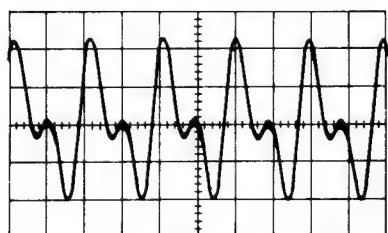


Fig. 5-10 R53/R63 setting (Incorrect)

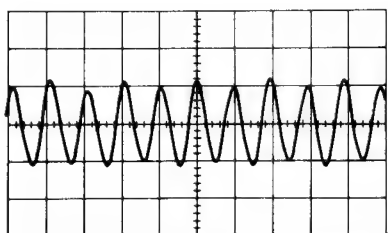


Fig. 5-11 R53/R63 setting (Correct)

5-5-1 ENCODING ADJUSTMENT

1. Preset all adjustors approximately to the center position.
2. Make the Fig. 5-12 connections, then feed 100 Hz, -8 dB (308 mV) to 1(6) terminal (INPUT).
3. Adjust R53/R63 (RMS SYM) to obtain a clear 200 Hz sine-wave on the oscilloscope. See Figs. 5-10 and 5-11.
4. Change the connections to Fig. 5-13, then feed a 1 kHz/-8 dB (308 mV) input signal to the INPUT terminal. Adjust R54/R64 (ENCODING LEVEL) so that AC voltmeter reads -8 dB (308 mV).
5. With the conditions in step 4, adjust R51/R61 (VCA SYM) for minimum distortion (0.2% or less).
6. Like Fig. 5-14, connect a DC voltmeter to TP51/TP61, then note the reading on the DC voltmeter with an input signal of 1 kHz/-8 dB (308 mV).
7. Cut off the input signal, then make the same measurement as in step 6 to adjust R52/R62 (EM ADJ) for the same level.
8. Repeat above steps 5 to 7 until the best results are obtained.
9. Check that when the input signal is 100 Hz/-8 dB (308 mV), then 10 kHz/-8 dB, the output signal from 3(4) terminal (OUTPUT) deviates by +0.5 dB \pm 0.5 dB, then -2.8 dB \pm 0.5 dB from -8 dB (reference), respectively.....so that output, as a voltage value, should be 308 mV to 346 mV for 100 Hz, and 211 mV to 237 mV for 10 kHz.
10. Check that when 1 kHz/-68 dB (308 μ V) is applied, the output is -38 dB \pm 0.5 dB (9.21 mV to 10.3 mV).
11. Check that when the input signal is 1 kHz, +12 dB (3.08 V), the output is +2 dB \pm 0.5 dB (581 mV to 652 mV) and the distortion factor is 0.3% or less.

5-5-2 DECODING ADJUSTMENT

1. Preset all adjustors approximately to the center position.
2. Make the Fig. 5-15 connections, then feed a 1 kHz/-8 dB (308 mV) input signal to the INPUT terminal. Adjust R55/R65 (DECODING LEVEL) so that AC voltmeter reads -8 dB (308 mV).
3. Check that when the input signal is 100 Hz/-8 dB (308 mV), then 10 kHz/-8 dB, the output signal from 3(4) terminal (OUTPUT) deviates by -1 dB \pm 0.5 dB, then +5 dB \pm 0.5 dB from -8 dB (reference), respectively.....so that output, as a voltage value, should be 652 mV to 731 mV for 100 Hz, and 1.30 V to 1.46 V for 10 kHz.
4. Check that when 1 kHz/-38 dB (9.75 μ V) is applied, the output is -68 dB \pm 1 dB (275 μ V to 346 μ V).
5. Check that when the input signal is 1 kHz, +2 dB (0.975 V), the output is +12 dB \pm 1 dB (2.75 V to 3.46 V) and the distortion factor is 0.3% or less.

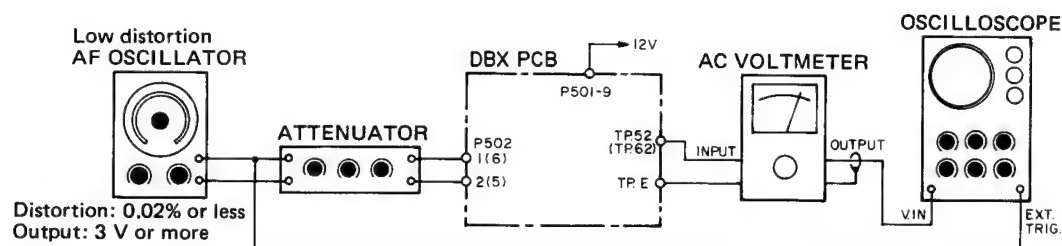


Fig. 5-12

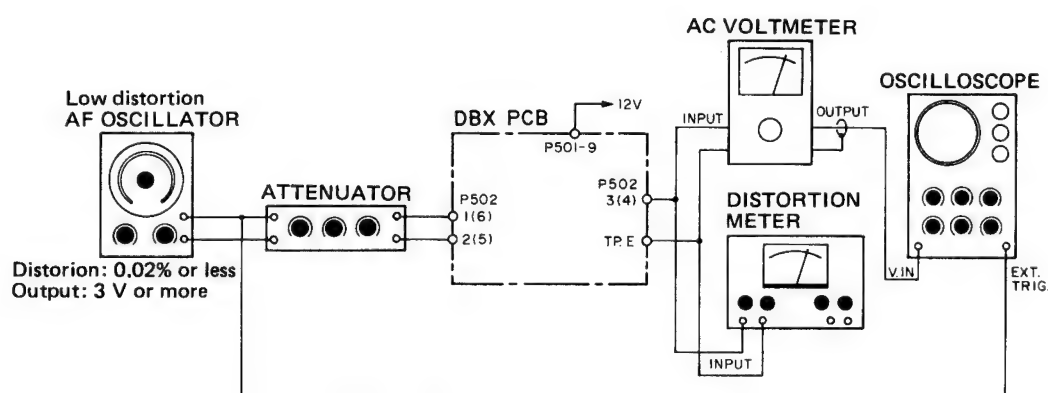


Fig. 5-13

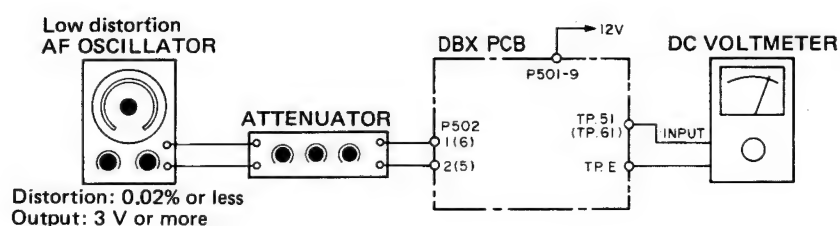


Fig. 5-14

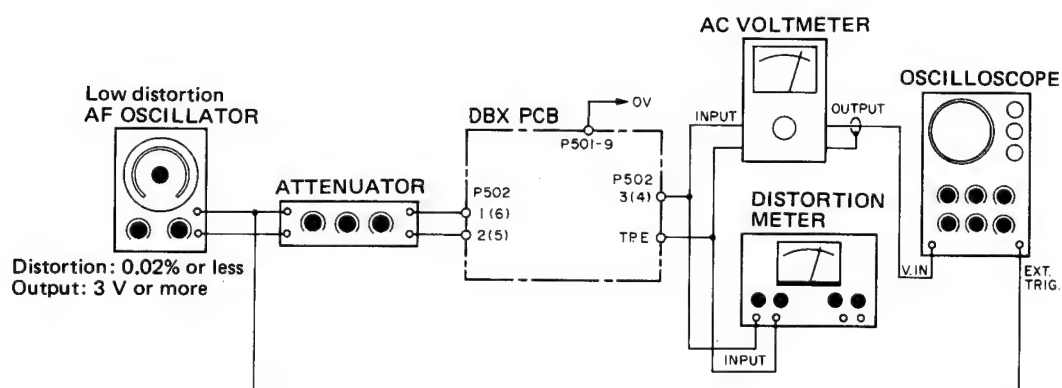


Fig. 5-15

5-6 ADJUSTMENT AND TEST POINT LOCATIONS

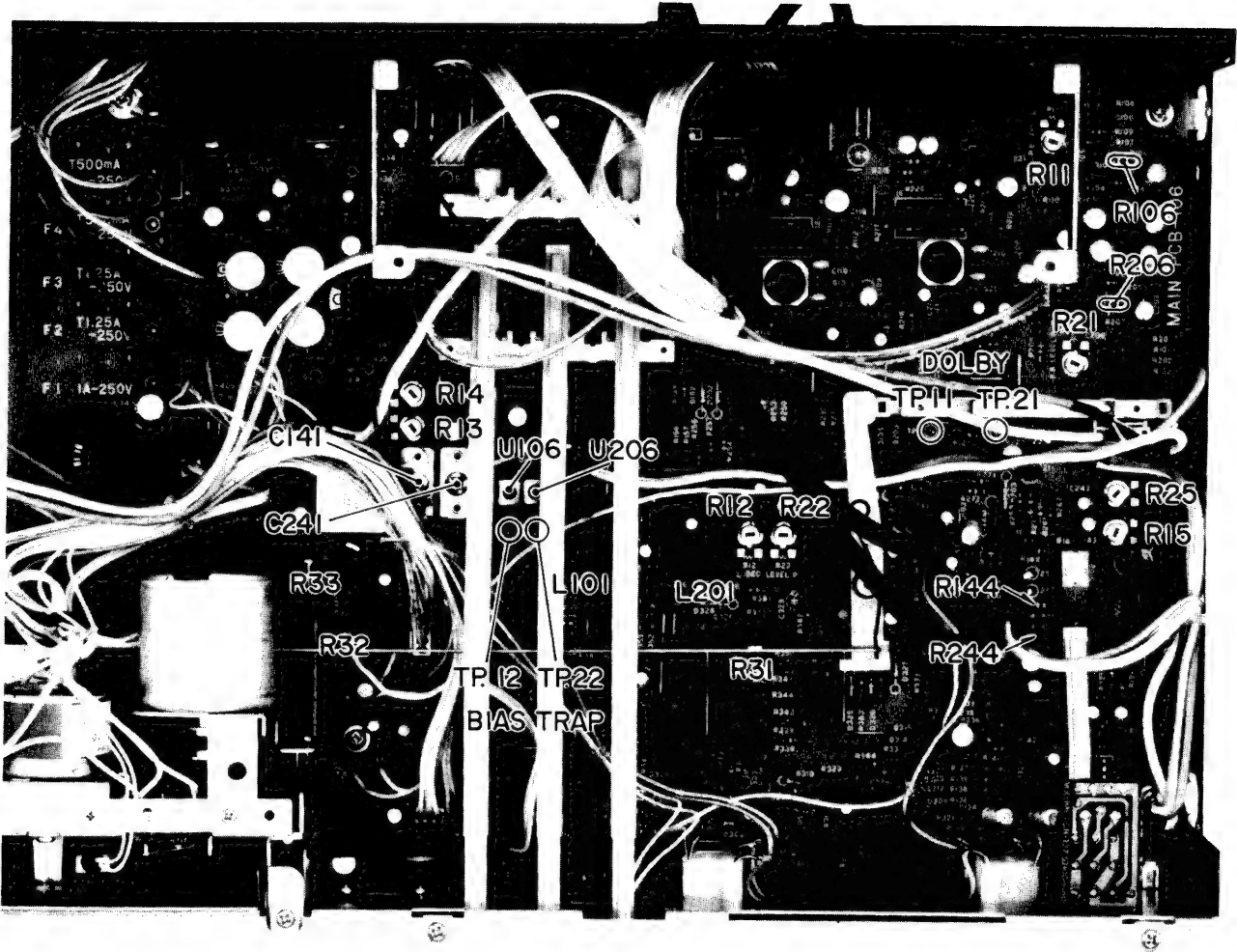


Fig. 5-16

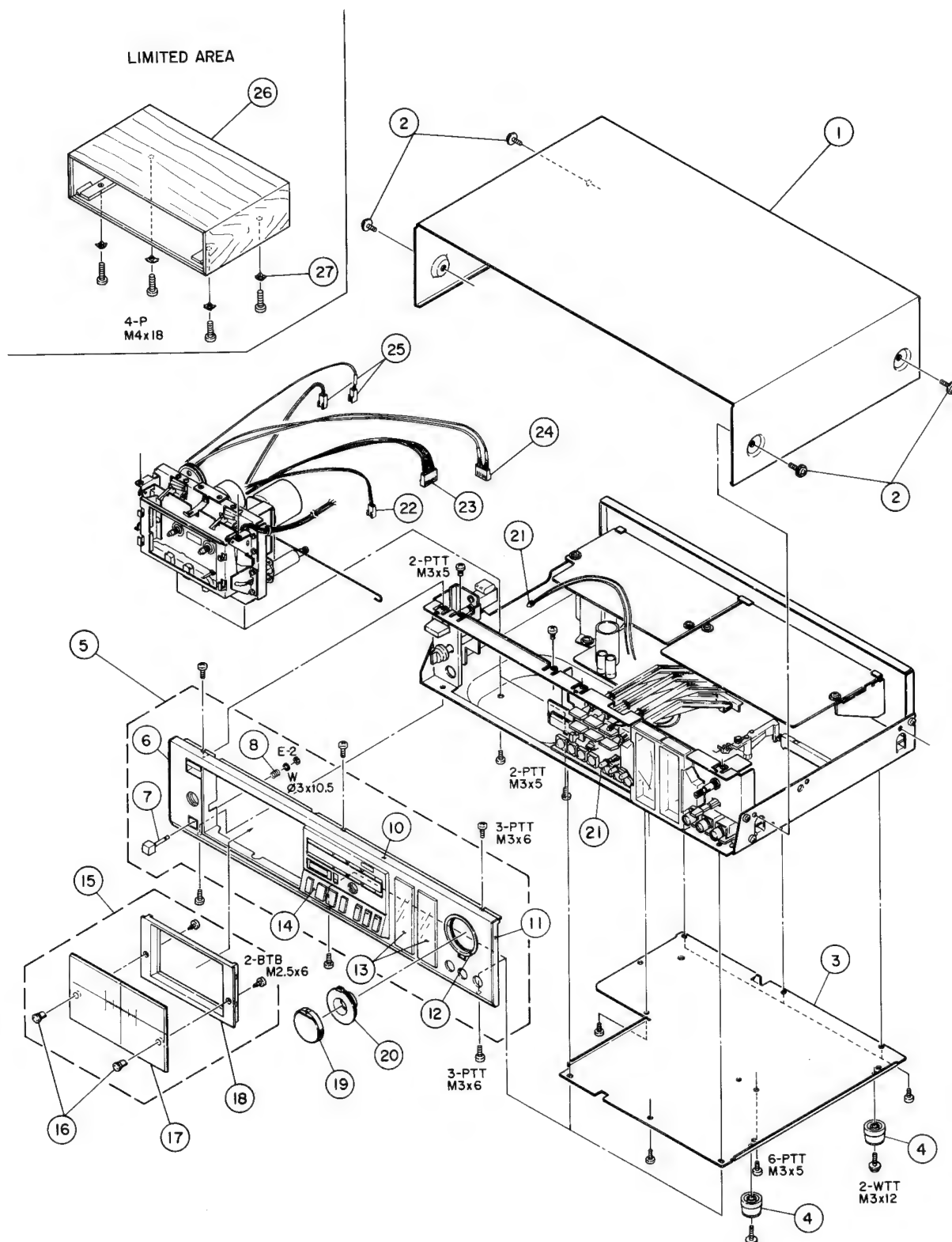


Fig. 5-17

| | |
|-----------|---|
| C141/C241 | Record bias [METAL] |
| L101/L201 | Frequency response [record] |
| R11/R21 | Playback level |
| R12/R22 | Record level |
| R13 | Record bias [NORMAL] |
| R14 | Record bias [Co (CrO ₂)] |
| R15/R25 | Peak level meter |
| R51/R61 | VCA SYM adjustment |
| R52/R62 | EM adjustment |
| R53/R63 | RMS SYM adjustment |
| R54/R64 | Encoding level |
| R55/R65 | Decoding level |
| R106/R206 | Frequency response [playback], fixed resistors |
| R144/R244 | Fine adj. for LINE input level, fixed resistors |
| U106/U206 | Bias trap |

6 EXPLODED VIEWS AND PARTS LIST

EXPLODED VIEW - 1 (V-3RX)



Parts marked with *require longer delivery time.

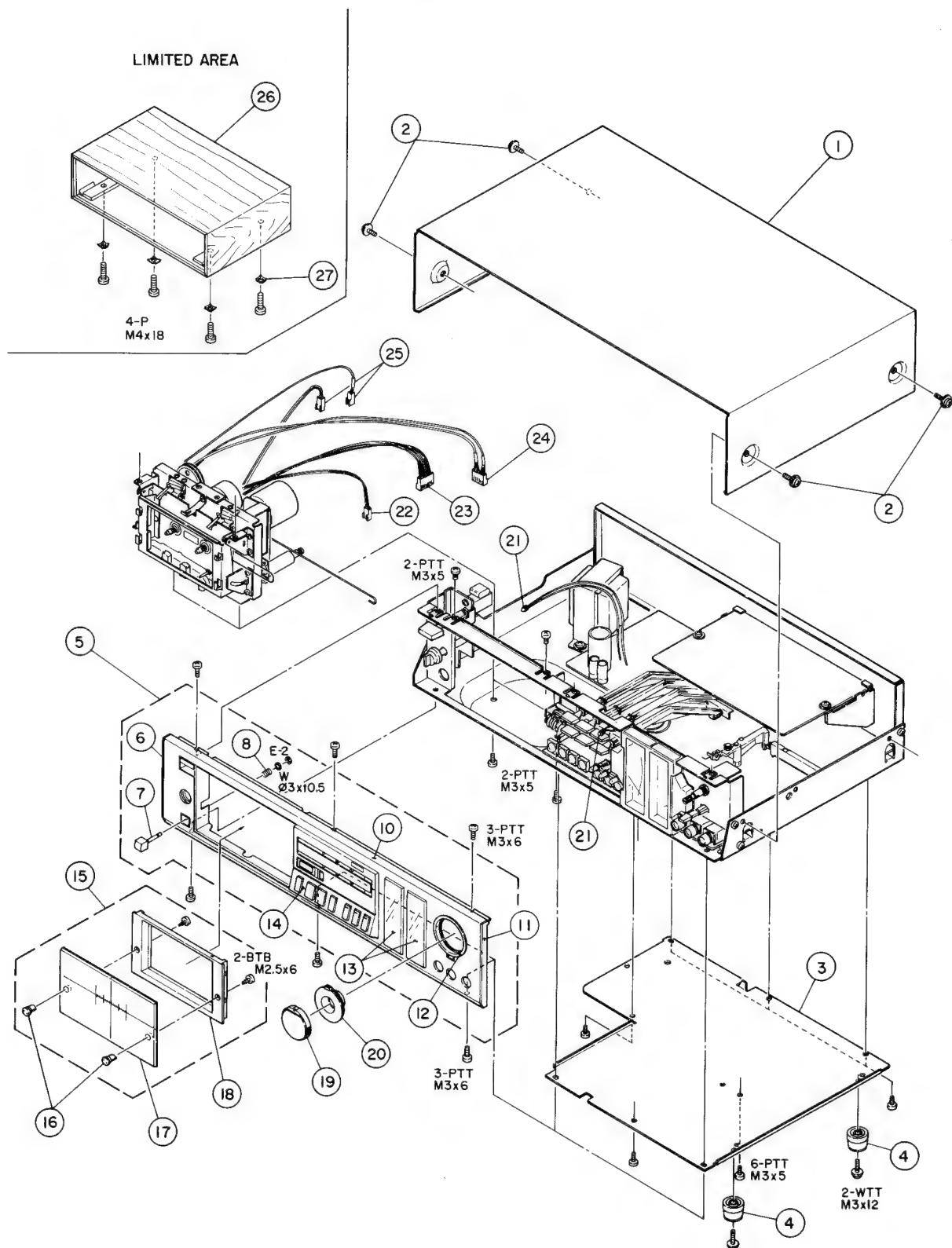
| REF. NO. | PARTS NO. | DESCRIPTION | REMARKS |
|----------|-------------|-------------------------------|----------------------------------|
| 1 - 1 | *5800155300 | Cover, Top | Part of 1 - 14 Part of 1 - 14 |
| 1 - 2 | *5783114000 | Screw, Frange M4 x 6 (BLK Ni) | |
| 1 - 3 | *5800155500 | Cover, Bottom [All except L] | |
| | *5800161800 | Cover Assy, Bottom [L] | |
| 1 - 4 | *5800116100 | Foot [All except L] | |
| 1 - 5 | *5640023600 | Panel Assy, Front | |
| 1 - 6 | *5800154400 | Sash, Side; L | |
| 1 - 7 | 5800113200 | Button, Eject | |
| 1 - 8 | *5800160000 | Spring, Earth | |
| 1 - 9 | | (Not used) | |
| 1 - 10 | *5800159901 | Panel, Front | |
| 1 - 11 | *5800154500 | Sash, Side; R | |
| 1 - 12 | *5800153602 | Escutcheon, VR | |
| 1 - 13 | *5800153400 | Cover, Meter | |
| 1 - 14 | *5800161004 | Escutcheon Assy, Cassette; B | |
| 1 - 15 | 5640023700 | Cover Assy, Cassette | |
| 1 - 16 | *5800116800 | Bushing | |
| 1 - 17 | *5800161203 | Cover, Cassette; (2) | |
| 1 - 18 | *5800122500 | Cover, Cassette; 2 | |
| 1 - 19 | 5800160101 | Knob, REC; A | |
| 1 - 20 | 5800160201 | Knob, REC; B | |
| 1 - 21 | 5142089000 | Lamp, DC 6V 65mA | |
| 1 - 22 | *5122222000 | Connector Socket, 3P | |
| 1 - 23 | *5122226000 | Connector Socket, 7P | |
| 1 - 24 | *5122225000 | Connector Socket, 6P | |
| 1 - 25 | *5122221000 | Connector Socket, 2P | |
| 1 - 26 | *5800161500 | Cabinet Assy [L] | |
| 1 - 27 | *5555526000 | Washer [L] | |

INCLUDED ACCESSORIES

| REF. NO. | PARTS NO. | DESCRIPTION | REMARKS |
|----------|------------|---|---------|
| | 5700016400 | V-3RX Owner's manual [J] | |
| | 5700016600 | V-3RX Owner's manual [US] | |
| | 5700016500 | V-3RX Owner's manual [All except J, US] | |
| | 5700016700 | V-5RX Owner's manual [J] | |
| | 5700016900 | V-5RX Owner's manual [US] | |
| | 5700016800 | V-5RX Owner's manual [All except J, US] | |
| | 5101369000 | Information Supplement [J] | |
| | 5101345000 | Information Supplement [US] | |
| | 5101495000 | Information Supplement [All except J, US] | |
| | | | |
| | | | |
| | | | |
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[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

EXPLODED VIEW - 2 (V-5RX)

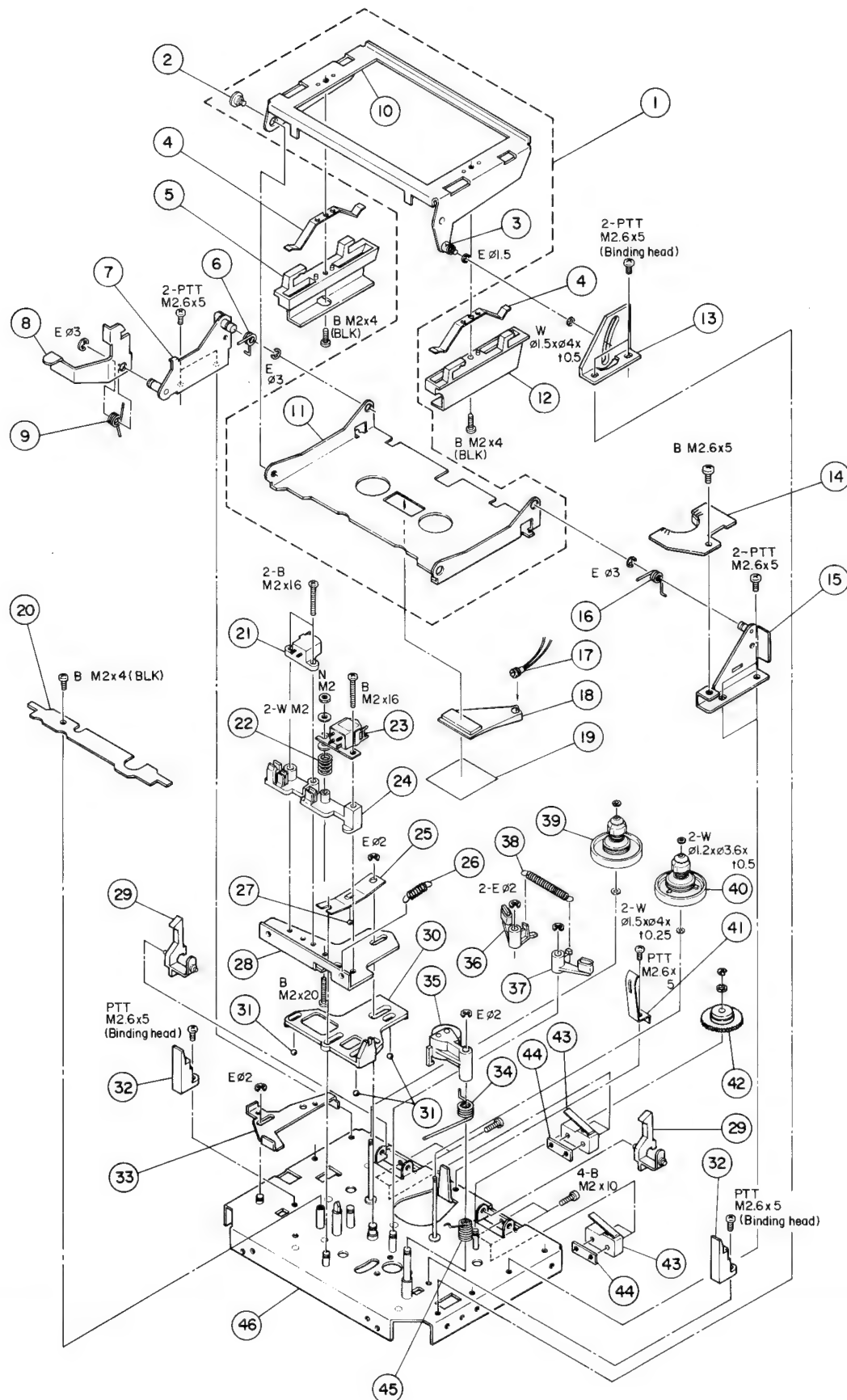


Parts marked with *require longer delivery time.

| REF. NO. | PARTS NO. | DESCRIPTION | REMARKS |
|----------|-------------|-------------------------------|----------------|
| 2 - 1 | *5800155300 | Cover, Top | |
| 2 - 2 | *5783114000 | Screw, Frange M4 x 6 (BLK Ni) | |
| 2 - 3 | *5800155500 | Cover, Bottom [All except L] | |
| | *5800161800 | Cover Assy, Bottom [L] | |
| 2 - 4 | *5800116100 | Foot [All except L] | |
| 2 - 5 | *5640021800 | Panel Assy, Front | |
| 2 - 6 | *5800154400 | Sash, Side; L | |
| 2 - 7 | 5800113200 | Button, Eject | Part of 2 - 14 |
| 2 - 8 | *5800160000 | Spring, Earth | Part of 2 - 14 |
| 2 - 9 | | (Not used) | |
| 2 - 10 | *5800155801 | Panel, Front | |
| 2 - 11 | *5800154500 | Sash, Side; R | |
| 2 - 12 | *5800153602 | Escutcheon, VR | |
| 2 - 13 | *5800153400 | Cover, Meter | |
| 2 - 14 | *5800161104 | Escutcheon Assy, Cassette; C | |
| 2 - 15 | 5640021900 | Cover Assy, Cassette | |
| 2 - 16 | *5800116800 | Bushing | |
| 2 - 17 | *5800152902 | Cover, Cassette; (1) | |
| 2 - 18 | *5800122500 | Cover, Cassette; 2 | |
| 2 - 19 | 5800160101 | Knob, REC; A | |
| 2 - 20 | 5800160201 | Knob, REC; B | |
| 2 - 21 | 5142089000 | Lamp, DC 6V 65mA | |
| 2 - 22 | *5122222000 | Connector Socket, 3P | |
| 2 - 23 | *5122226000 | Connector Socket, 7P | |
| 2 - 24 | *5122225000 | Connector Socket, 6P | |
| 2 - 25 | *5122221000 | Connector Socket, 2P | |
| 2 - 26 | *5800161500 | Cabinet Assy [L] | |
| 2 - 27 | *5555526000 | Washer [L] | |

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EXPLODED VIEW - 3 (V-3RX)

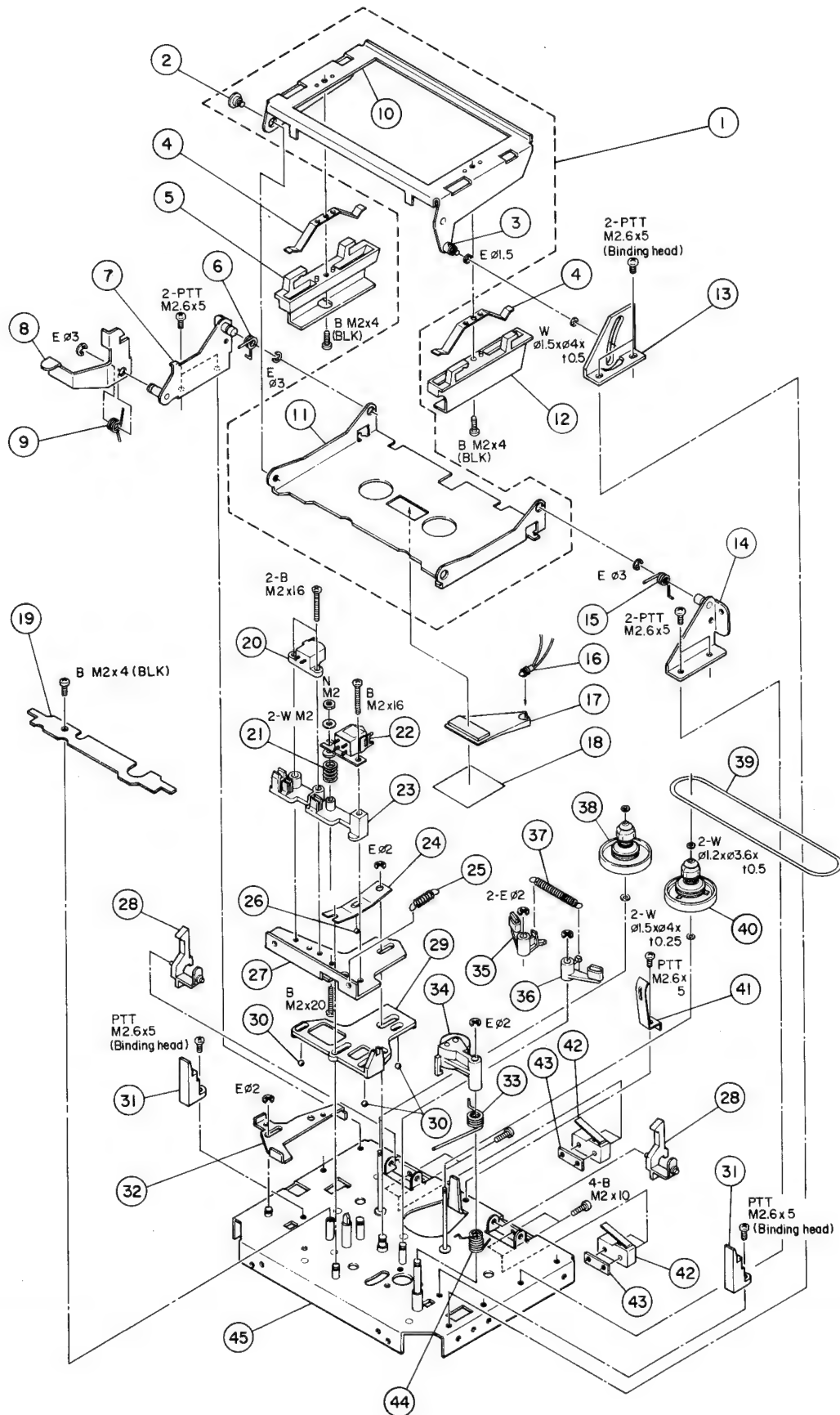


Parts marked with *require longer delivery time.

| REF. NO. | PARTS NO. | DESCRIPTION | REMARKS |
|----------|-------------|--------------------------------|--------------|
| 3 - 1 | *5800157400 | Holder Sub-assy, Cassette | A-304 |
| 3 - 2 | *5581056000 | Screw, Shoulder; A | |
| 3 - 3 | *5800120100 | Roller, Guide | |
| 3 - 4 | *5800115402 | Spring, Cassette Pressure | |
| 3 - 5 | *5800109600 | Holder, L | |
| 3 - 6 | *5800115500 | Spring, Holder; L | |
| 3 - 7 | *5800121300 | Bracket Assy, Holder; L | |
| 3 - 8 | *5800119100 | Arm, Eject | |
| 3 - 9 | *5800115700 | Spring, Lock | |
| 3 - 10 | *5800122901 | Holder Sub-assy, Cassette; (1) | |
| 3 - 11 | *5800157300 | Holder, Cassette; (3) | A-700 C-2 |
| 3 - 12 | *5800122100 | Holder, R | |
| 3 - 13 | *5800119000 | Bracket, Holder Guide | |
| 3 - 14 | *5200047801 | PCB-109 Assy SENSOR | |
| 3 - 15 | *5800159200 | Bracket Assy, Holder; R | |
| 3 - 16 | *5800115600 | Spring, Holder; R | |
| 3 - 17 | 5142201000 | Lamp, DC 6V 65mA | |
| 3 - 18 | *5800033300 | Lens, Lamp | |
| 3 - 19 | *5800002900 | Plate, Reflective | |
| 3 - 20 | *5800169400 | Cover, Head | |
| 3 - 21 | 5569613000 | Head, Erase | C-3 |
| 3 - 22 | *5800114700 | Spring, Head | |
| 3 - 23 | 5378900600 | Head, REC/PLAY | |
| 3 - 24 | *5800122600 | Stand, Head | |
| 3 - 25 | *5800114900 | Spring, Base Plate Pressure | |
| 3 - 26 | *5800114100 | Spring, Head Base | |
| 3 - 27 | 5540055000 | Steel Ball, $\phi 2$ | |
| 3 - 28 | *5800119300 | Plate, Head Base | |
| 3 - 29 | *5800117301 | Arm, Sensor | |
| 3 - 30 | *5800122800 | Plate, Slider | |
| 3 - 31 | 5540056000 | Steel Ball, $\phi 3$ | |
| 3 - 32 | *5800117400 | Guide, Cassette | |
| 3 - 33 | *5800119200 | Plate, Stopper | |
| 3 - 34 | *5800115300 | Spring, Pinch Roller Arm | |
| 3 - 35 | 5800120400 | Arm Assy, Pinch Roller | |
| 3 - 36 | *5800131601 | Arm Assy, Brake; L | |
| 3 - 37 | *5800131701 | Arm Assy, Brake; R | |
| 3 - 38 | *5800114800 | Spring, Brake | |
| 3 - 39 | 5800107300 | Table Assy, Reel; Supply | |
| 3 - 40 | 5800108701 | Table Assy, Reel; Take-up | |
| 3 - 41 | *5800115002 | Spring, Cassette Pressure | |
| 3 - 42 | 5800158800 | Gear Assy, Counter; A | |
| 3 - 43 | *5301455300 | Switch, Micro | |
| 3 - 44 | *5554447000 | Plate, Micro Switch | |
| 3 - 45 | *5800152600 | Spring, Arm Return | |
| 3 - 46 | *5800159501 | Chassis Assy, Mechanism | |

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EXPLODED VIEW - 4 (V-5RX)

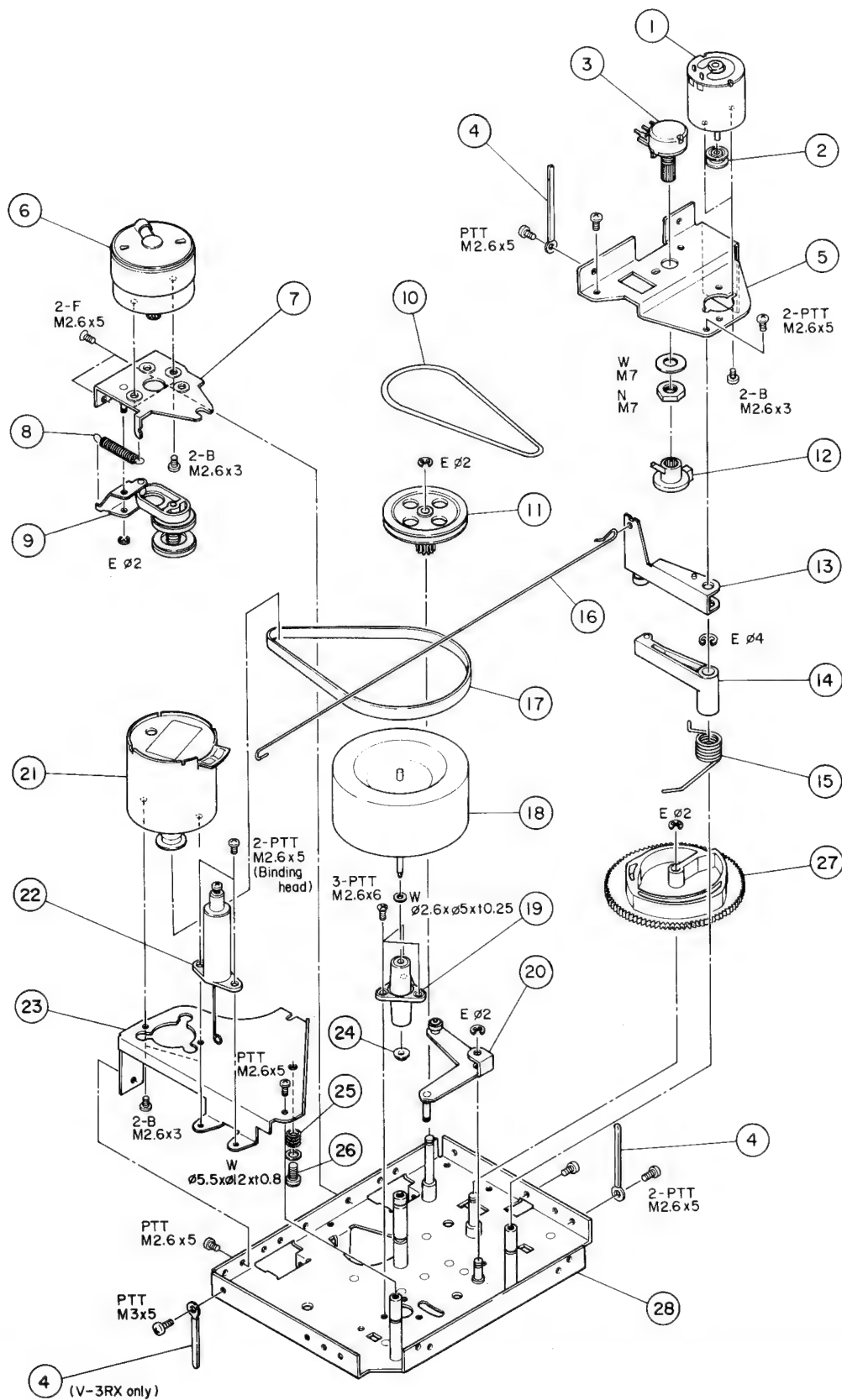


Parts marked with *require longer delivery time.

| REF. NO. | PARTS NO. | DESCRIPTION | REMARKS |
|----------|-------------|--------------------------------|---------------------|
| 4 - 1 | *5800157400 | Holder Sub-assy, Cassette | A-304 |
| 4 - 2 | *5581056000 | Screw, Shoulder; A | |
| 4 - 3 | *5800120100 | Roller, Guide | |
| 4 - 4 | *5800115401 | Spring, Cassette Pressure | |
| 4 - 5 | *5800109600 | Holder, L | |
| 4 - 6 | *5800115500 | Spring, Holder; L | |
| 4 - 7 | *5800121300 | Bracket Assy, Holder; L | |
| 4 - 8 | *5800119100 | Arm, Eject | |
| 4 - 9 | *5800115700 | Spring, Lock | |
| 4 - 10 | *5800122901 | Holder Sub-assy, Cassette; (1) | |
| 4 - 11 | *5800157300 | Holder, Cassette, (3) | A-700 C-2 C-3 |
| 4 - 12 | *5800122100 | Holder, R | |
| 4 - 13 | *5800119000 | Bracket, Holder Guide | |
| 4 - 14 | *5800121400 | Bracket Assy, Holder; R | |
| 4 - 15 | *5800115600 | Spring, Holder; R | |
| 4 - 16 | 5142201000 | Lamp, DC 6V 65mA | |
| 4 - 17 | *5800033300 | Lens, Lamp | |
| 4 - 18 | *5800002900 | Plate, Reflective | |
| 4 - 19 | *5800169400 | Cover, Head | |
| 4 - 20 | 5569613000 | Head, Erase | |
| 4 - 21 | *5800114700 | Spring, Head | |
| 4 - 22 | 5378600200 | Head, REC/PLAY | |
| 4 - 23 | *5800122600 | Stand, Head | |
| 4 - 24 | *5800114900 | Spring, Base Plate Pressure | |
| 4 - 25 | *5800114100 | Spring, Head Base | |
| 4 - 26 | 5540055000 | Steel Ball, ϕ 2 | |
| 4 - 27 | *5800119300 | Plate, Head Base | |
| 4 - 28 | *5800117301 | Arm, Sensor | |
| 4 - 29 | *5800122800 | Plate, Slider | |
| 4 - 30 | 5540056000 | Steel Ball, ϕ 3 | |
| 4 - 31 | *5800117400 | Guide, Cassette | |
| 4 - 32 | *5800119200 | Plate, Stopper | |
| 4 - 33 | *5800115300 | Spring, Pinch Roller Arm | |
| 4 - 34 | 5800120400 | Arm Assy, Pinch Roller | |
| 4 - 35 | *5800131601 | Arm Assy, Brake; L | |
| 4 - 36 | *5800131701 | Arm Assy, Brake; R | |
| 4 - 37 | *5800114800 | Spring, Brake | |
| 4 - 38 | 5800107300 | Table Assy, Reel; Supply | |
| 4 - 39 | 5800106700 | Belt, Counter | |
| 4 - 40 | 5800108701 | Table Assy, Reel; Take-up | |
| 4 - 41 | *5800115002 | Spring, Cassette Pressure | |
| 4 - 42 | *5301455300 | Switch, Micro | |
| 4 - 43 | *5554447000 | Plate, Micro Switch | |
| 4 - 44 | *5800152600 | Spring, Arm Return | |
| 4 - 45 | *5800169500 | Chassis Assy, Mechanism | |

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
 [A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

EXPLODED VIEW - 5 (V-3RX/V-5RX)

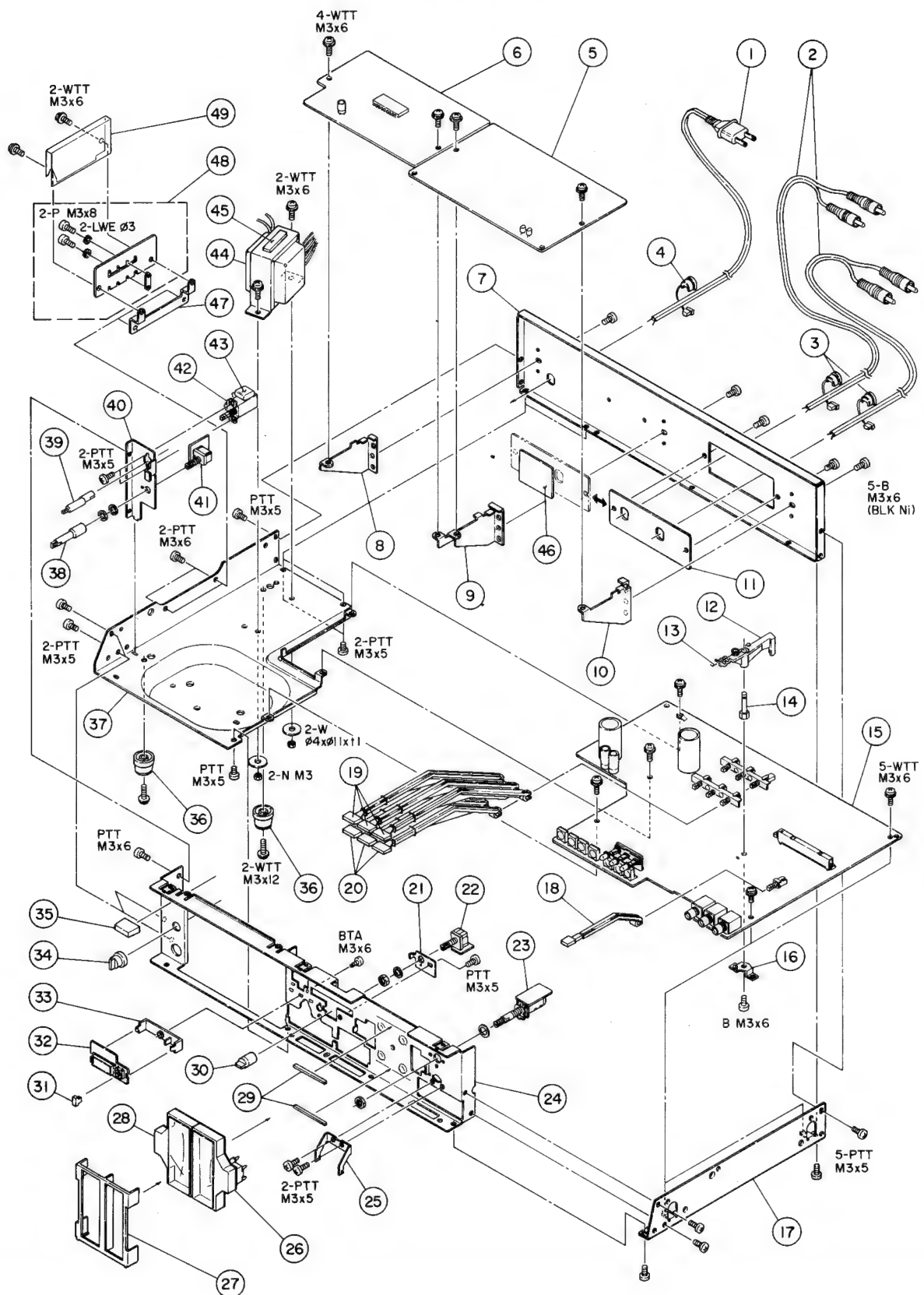


Parts marked with *require longer delivery time.

| REF. NO. | PARTS NO. | DESCRIPTION | REMARKS |
|----------|-------------|------------------------------------|---------|
| 5 - 1 | 5370001400 | Motor, Control; DC | A-400 |
| 5 - 2 | 5800123300 | Pulley, V | |
| 5 - 3 | 5282009601 | Var. Res., 10k Ω (B) (R403) | |
| 5 - 4 | *5581038000 | Clamper, Cord; A | |
| 5 - 5 | *5800122200 | Bracket, Motor | |
| 5 - 6 | 5370001200 | Motor Assy, Reel; DC | |
| 5 - 7 | *5800121800 | Bracket Assy, Reel Motor | |
| 5 - 8 | *5800115800 | Spring, Idler Arm | |
| 5 - 9 | 5800107800 | Idler Assy | |
| 5 - 10 | 5800106800 | Belt, Reduction Pulley | |
| 5 - 11 | 5800117200 | Pulley, Reduction | |
| 5 - 12 | *5800116700 | Joint | |
| 5 - 13 | *5800107001 | Lever Sub-assy, Record | |
| 5 - 14 | *5800105400 | Arm Assy, Balance | |
| 5 - 15 | *5800114600 | Spring, Balance Arm | |
| 5 - 16 | *5800154200 | Rod, Record | |
| 5 - 17 | 5800106900 | Belt, Capstan Drive | |
| 5 - 18 | 5800106401 | Flywheel Assy, Capstan | |
| 5 - 19 | 5800106200 | Housing Assy, Capstan | |
| 5 - 20 | *5800105801 | Arm Assy, Base Plate Actuating | |
| 5 - 21 | 5370001101 | Motor Assy, Capstan; DC | |
| 5 - 22 | *5800131802 | Damper Assy | |
| 5 - 23 | *5800122301 | Bracket, Flywheel | |
| 5 - 24 | *5534130000 | Retainer, Oil | |
| 5 - 25 | *5800161400 | Spring, Thrust | |
| 5 - 26 | *5800156300 | Screw, Thrust | |
| 5 - 27 | *5800122700 | Cam, Control | |
| 5 - 28 | *5800159501 | Chassis Assy, Mechanism (V-3RX) | |
| | *5800169501 | Chassis Assy, Mechanism (V-5RX) | |

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

EXPLODED VIEW - 6 (V-3RX)

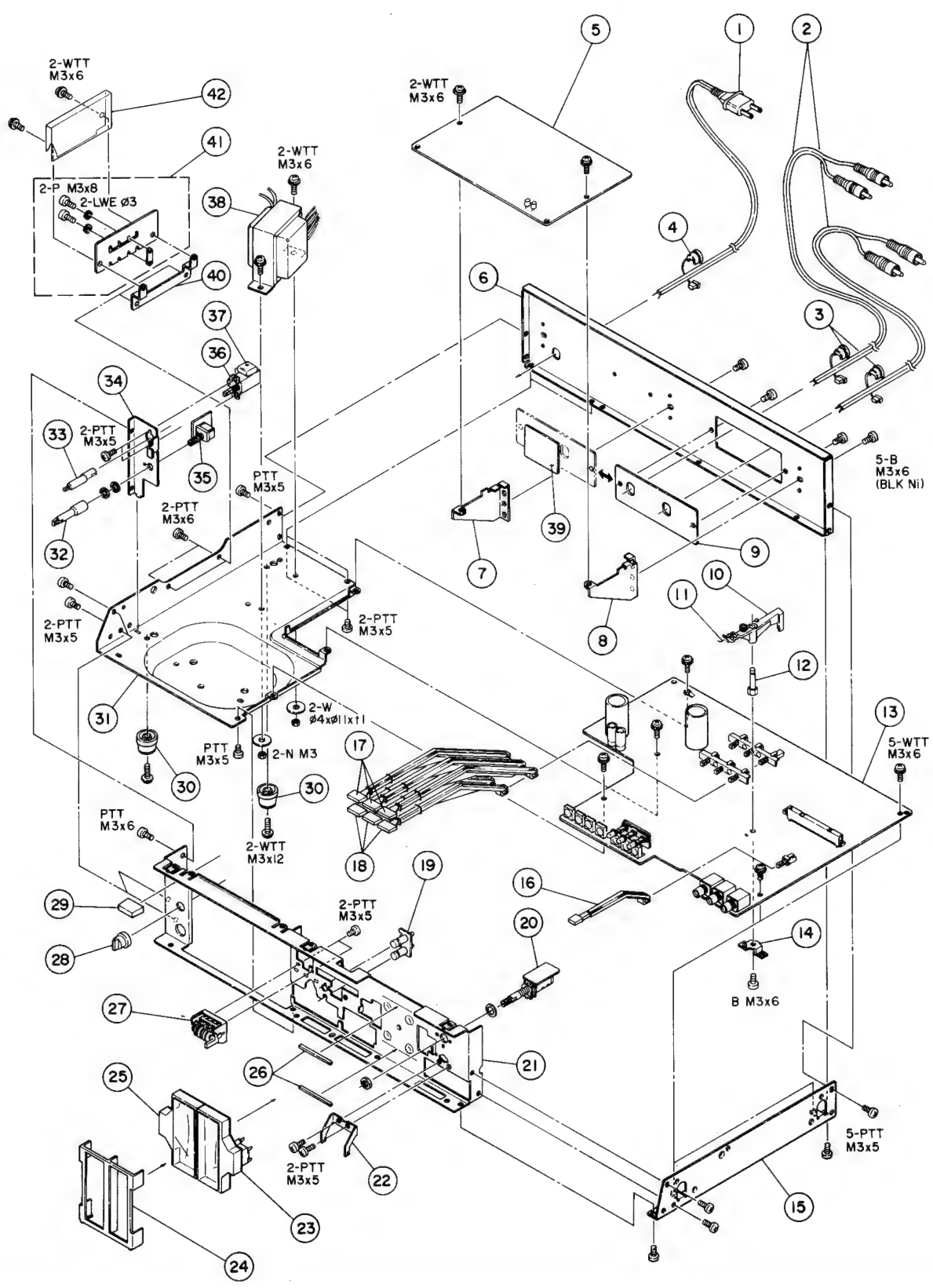


Parts marked with *require longer delivery time.

| REF. NO. | PARTS NO. | DESCRIPTION | REMARKS |
|----------|---------------|---|---------|
| 6 - 1 | △ 5128034000 | Cord, AC Power [J] | |
| | △ 5128075000 | Cord, AC Power [US, C, GE, L] | |
| | △ 5128047000 | Cord, AC Power [UK] | |
| | △ 5350008200 | Cord, AC Power [E] | |
| | △ 5350008300 | Cord, AC Power [A] | |
| 6 - 2 | 5350008700 | Cord, In-output [US] | |
| | 5350008600 | Cord, In-output [All except US] | |
| 6 - 3 | *5534660000 | Strain Relief, Cord; 4N-4 | |
| 6 - 4 | *5534661000 | Strain Relief, Cord; 4K-1 [UK] | |
| | *5534660000 | Strain Relief, Cord; 4N-4 [All except UK] | |
| 6 - 5 | *5200046100 | PCB-105 Assy, dBX | |
| 6 - 6 | *5200047501 | PCB-101 Assy, BLOCK REPEAT | |
| 6 - 7 | *5800155700 | Panel, Rear | |
| 6 - 8 | *5800153901 | Bracket, PCB; B | |
| 6 - 9 | *5800158002 | Bracket, PCB; C | |
| 6 - 10 | *5800153801 | Bracket, PCB; A | |
| 6 - 11 | *5800117801 | Plate, In-output; A [All except E] | |
| | *5800117901 | Plate, In-output; B [E] | |
| 6 - 12 | *5800154600 | Arm, Record | |
| 6 - 13 | *5800115200 | Spring, Record | |
| 6 - 14 | *5800154000 | Shaft, Record Arm | |
| 6 - 15 | *5200048001 | PCB-106 Assy, MAIN [All except E, UK] | |
| | *5200048100 | PCB-106 Assy, MAIN [E, UK] | |
| 6 - 16 | *5800154100 | Bracket, PCB | |
| 6 - 17 | *5800155401 | Chassis, R | |
| 6 - 18 | 5800154800 | Button, C | |
| 6 - 19 | 5800155100 | Button, A | |
| 6 - 20 | 5800155200 | Button, B | |
| 6 - 21 | *5800153000 | Bracket, MEMORY Switch | |
| 6 - 22 | *5200047700 | PCB-172 Assy, SW | |
| 6 - 23 | *5200046800 | PCB-127 Assy, VOLUME | |
| 6 - 24 | *5800155902 | Chassis, Front | |
| 6 - 25 | *5800156800 | Bracket, Jack | |
| 6 - 26 | 5296002800 | Meter, Peak Level; R | |
| 6 - 27 | *5800157101 | Escutcheon, Meter | |
| 6 - 28 | 5296002700 | Meter, Peak Level; L | |
| 6 - 29 | *5800153100 | Cushion, Meter | |
| 6 - 30 | 5800160900 | Knob, MEMORY | |
| 6 - 31 | 5800160800 | Button, Clear | |
| 6 - 32 | *5200047300 | PCB-102 Assy, COUNTER | |
| 6 - 33 | *5800153502 | Bracket, COUNTER PCB | |
| 6 - 34 | 5800044300 | Knob, TIMER | |
| 6 - 35 | 5800119700 | Button, POWER | |
| 6 - 36 | *5800116100 | Foot [All except L] | |
| 6 - 37 | *5800155600 | Chassis, L [All except L] | |
| | *5800161900 | Chassis Assy, L [L] | |
| 6 - 38 | *5800154700 | Rod, Joint | |
| 6 - 39 | *5800116200 | Rod, A | |
| 6 - 40 | *5800154300 | Bracket, Switch | |
| 6 - 41 | *5200047600 | PCB-110 Assy, TIMER | |
| 6 - 42 | △ 5134122000 | Switch, Push; POWER [GE, L] | |
| | △ 5300019200 | Switch, Push; POWER [J] | |
| | △ 5300019300 | Switch, Push; POWER [US, C] | |
| | △ 5300019400 | Switch, Push; POWER [E, UK, A] | |
| 6 - 43 | △ 5052905000 | Spark Killer, 0.1μF + 120Ω/300V [J] | |
| | △ 5052906000 | Spark Killer, 0.33μF + 120Ω/250V [US] | |
| | △ 5052911000 | Spark Killer, 0.033μF + 120Ω/250V [C] | |
| | △ 5267702500 | Spark Killer, 0.047μF/250V [E, UK, A] | |
| | △ 5292002500 | Spark Killer, 0.01μF + 300Ω [GE, L] | |
| 6 - 44 | △ *5320009300 | Transformer, Power [J] | |
| | △ *5320009400 | Transformer, Power [US] | |
| | △ *5320009500 | Transformer, Power [GE, L] | |
| | △ *5320009600 | Transformer, Power [E, UK, A] | |
| | △ *5320009800 | Transformer, Power [C] | |
| 6 - 45 | *5555570000 | Cushion, Top Cover; B | |
| 6 - 46 | *5200047000 | PCB Assy, DIN [E] | |
| 6 - 47 | *5800154900 | Bracket [GE, L] | |
| 6 - 48 | *5200047100 | PCB-103 Assy, VOLTAGE SELECTOR [GE, L] | |
| 6 - 49 | *5800157800 | Cover, SELECTOR PCB [GE, L] | |

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

EXPLODED VIEW - 7 (V-5RX)



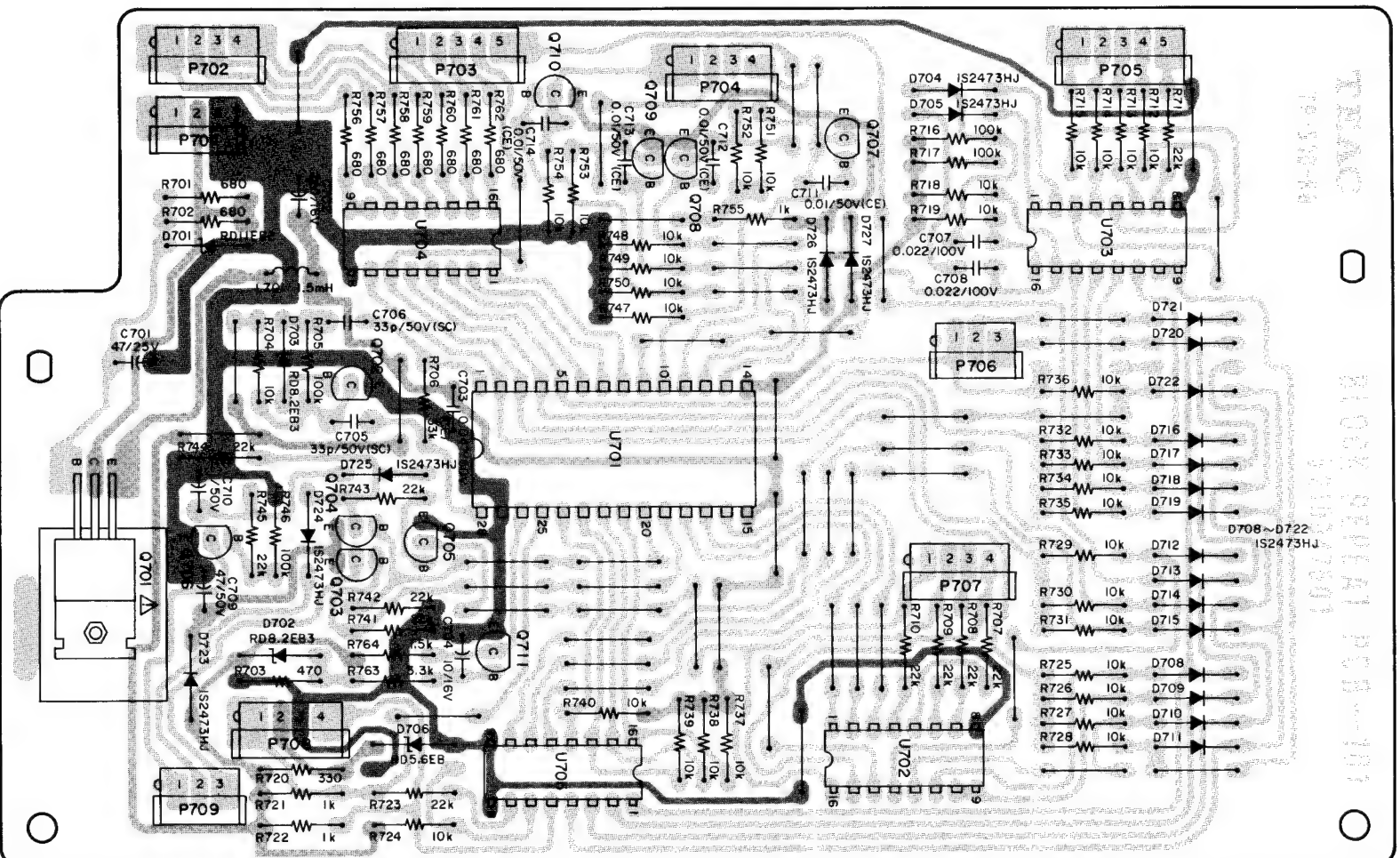
Parts marked with *require longer delivery time.

| REF. NO. | PARTS NO. | DESCRIPTION | REMARKS |
|----------|---------------|---|---------|
| 7 - 1 | △ 5128034000 | Cord, AC Power [J] | |
| | △ 5128075000 | Cord, AC Power [US, C, GE, L] | |
| | △ 5128047000 | Cord, AC Power [UK] | |
| | △ 5350008200 | Cord, AC Power [E] | |
| | △ 5350008300 | Cord, AC Power [A] | |
| 7 - 2 | 5350008700 | Cord, In-output [US] | |
| | 5350008600 | Cord, In-output [All except US] | |
| 7 - 3 | *5534660000 | Strain Relief, Cord; 4N-4 | |
| 7 - 4 | *5534661000 | Strain Relief, Cord; 4K-1 [UK] | |
| | *5534660000 | Strain Relief, Cord; 4N-4 [All except UK] | |
| 7 - 5 | *5200046100 | PCB-105 Assy, dBX | |
| 7 - 6 | *5800155700 | Panel, Rear | |
| 7 - 7 | *5800153901 | Bracket, PCB; B | |
| 7 - 8 | *5800153801 | Bracket, PCB; A | |
| 7 - 9 | *5800117801 | Plate, In-output; A [All except E] | |
| | *5800117901 | Plate, In-output; B [E] | |
| 7 - 10 | *5800154600 | Arm, Record | |
| 7 - 11 | *5800115200 | Spring, Record | |
| 7 - 12 | *5800154000 | Shaft, Record Arm | |
| 7 - 13 | *5200046703 | PCB-106 Assy, MAIN [All except E, UK] | |
| | *5200046710 | PCB-106 Assy, MAIN [E, UK] | |
| 7 - 14 | *5800154100 | Bracket, PCB | |
| 7 - 15 | *5800155401 | Chassis, R | |
| 7 - 16 | 5800154800 | Button, C | |
| 7 - 17 | 5800155100 | Button, A | |
| 7 - 18 | 5800155200 | Button, B | |
| 7 - 19 | *5200047200 | PCB-171 Assy, SW | |
| 7 - 20 | *5200046800 | PCB-127 Assy, VOLUME | |
| 7 - 21 | *5800155902 | Chassis, Front | |
| 7 - 22 | *5800156800 | Bracket, Jack | |
| 7 - 23 | 5296002800 | Meter, Peak Level; R | |
| 7 - 24 | *5800157101 | Escutcheon, Meter | |
| 7 - 25 | 5296002700 | Meter, Peak Level; L | |
| 7 - 26 | *5800153100 | Cushion, Meter | |
| 7 - 27 | 5800161301 | Counter Assy | |
| 7 - 28 | 5800044300 | Knob, TIMER | |
| 7 - 29 | 5800119700 | Button, POWER | |
| 7 - 30 | *5800116100 | Foot [All except L] | |
| 7 - 31 | *5800155600 | Chassis, L [All except L] | |
| | *5800161900 | Chassis Assy, L [L] | |
| 7 - 32 | *5800154700 | Rod, Joint | |
| 7 - 33 | *5800116200 | Rod, A | |
| 7 - 34 | *5800154300 | Bracket, Switch | |
| 7 - 35 | *5200047900 | PCB-109 Assy, TIMER | |
| 7 - 36 | △ 5134122000 | Switch, Push; POWER [GE, L] | |
| | △ 5300019200 | Switch, Push; POWER [J] | |
| | △ 5300019300 | Switch, Push; POWER [US] | |
| | △ 5300019400 | Switch, Push; POWER [E, UK, A] | |
| 7 - 37 | △ 5052905000 | Spark Killer, 0.1μF + 120Ω/300V [J] | |
| | △ 5052906000 | Spark Killer, 0.33μF + 120Ω/250V [US] | |
| | △ 5052911000 | Spark Killer, 0.033μF + 120Ω/250V [C] | |
| | △ 5267702500 | Spark Killer, 0.047μF/250V [E, UK, A] | |
| | △ 5292002500 | Spark Killer, 0.01μF + 300Ω [GE, L] | |
| 7 - 38 | △ *5320009300 | Transformer, Power [J] | |
| | △ *5320009400 | Transformer, Power [US] | |
| | △ *5320009500 | Transformer, Power [GE, L] | |
| | △ *5320009600 | Transformer, Power [E, UK, A] | |
| | △ *5320009800 | Transformer, Power [C] | |
| 7 - 39 | *5200047000 | PCB Assy, DIN [E] | |
| 7 - 40 | *5800154900 | Bracket [GE, L] | |
| 7 - 41 | *5200047100 | PCB-103 Assy, VOLTAGE SELECTOR [GE, L] | |
| 7 - 42 | *5800157800 | Cover, SELECTOR PCB [GE, L] | |

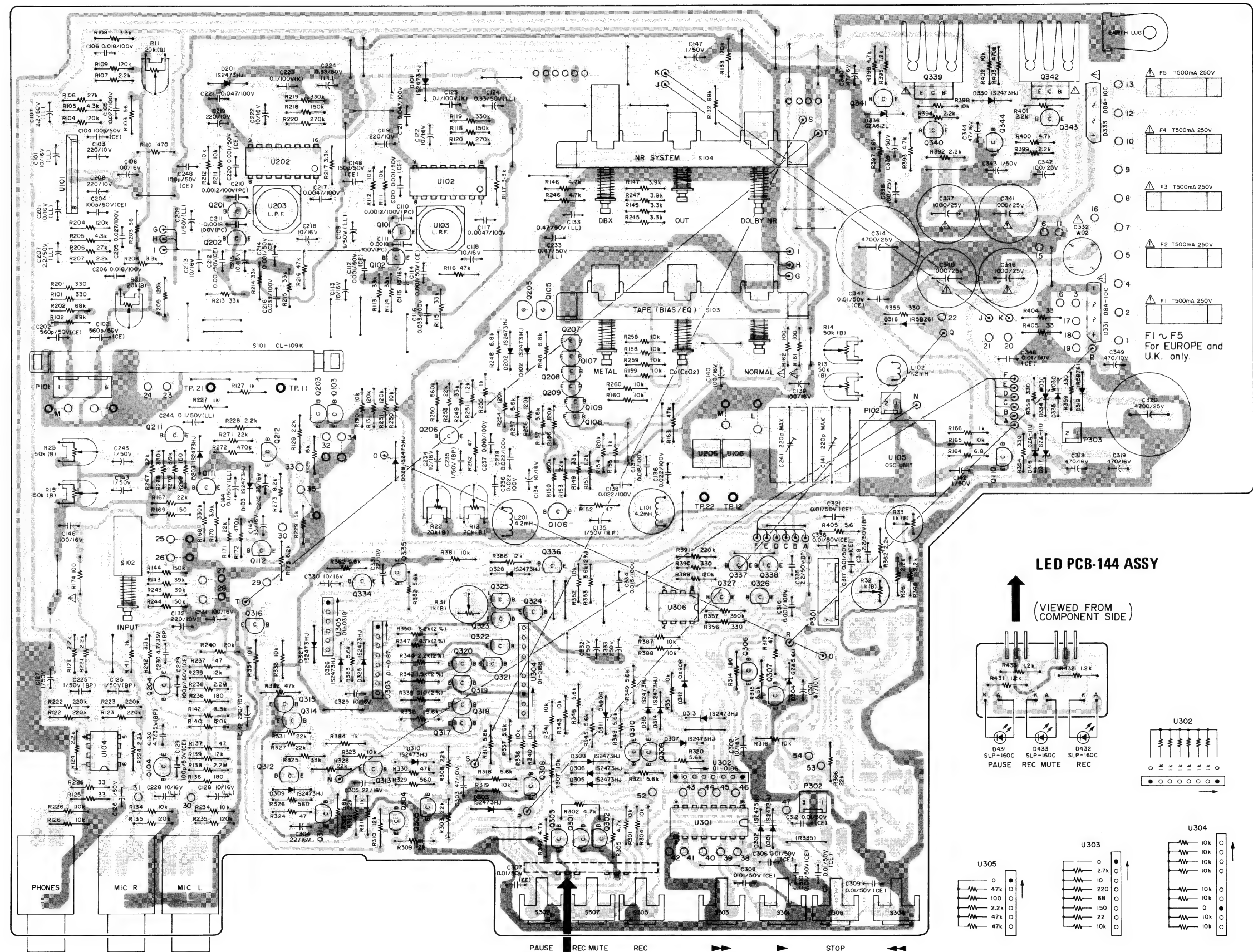
[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

7 PC BOARDS AND PARTS LIST

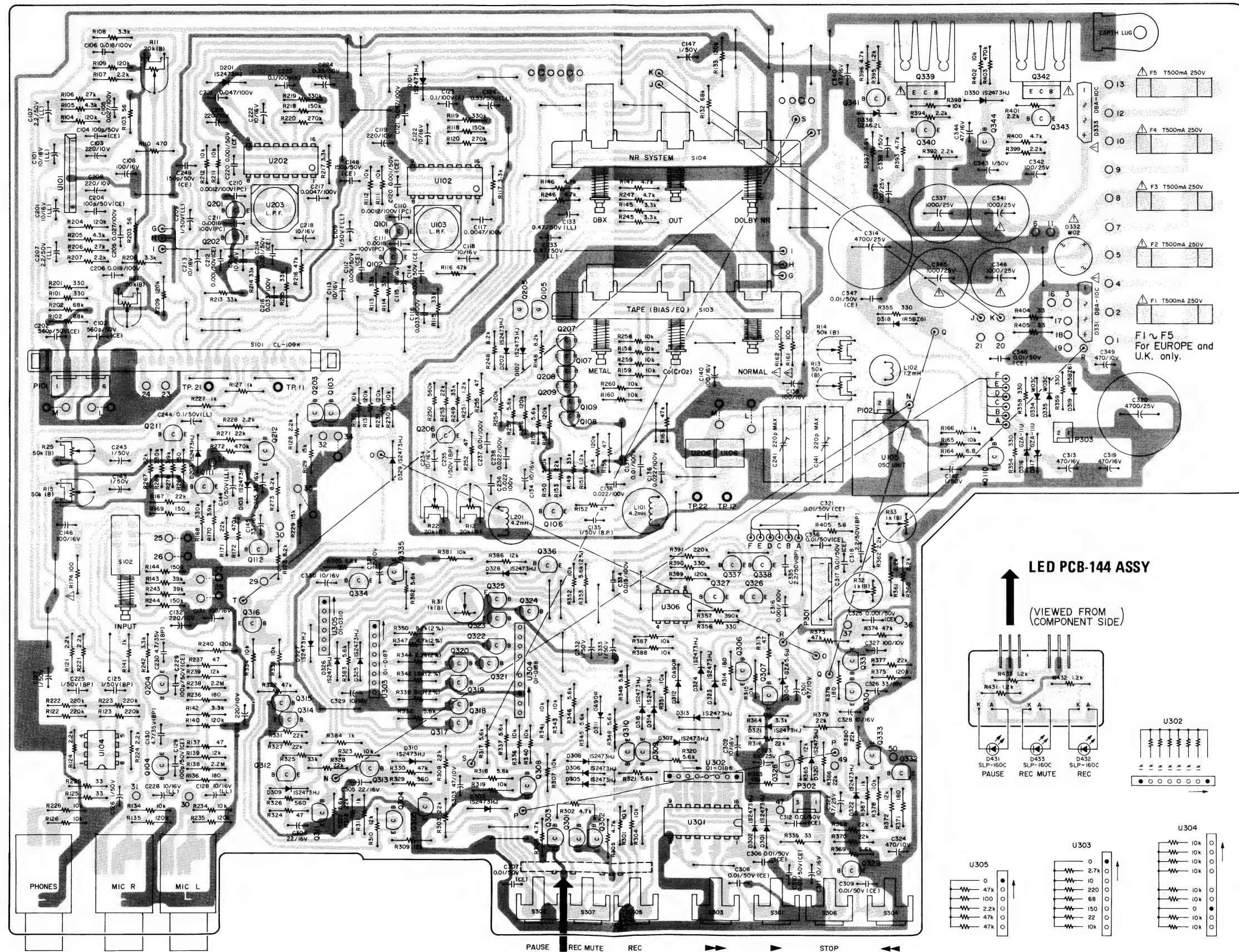
PC Boards shown viewed from foil side except LED PCB ASSY
BLOCK REPEAT PCB-101 ASSY (V-3RX)

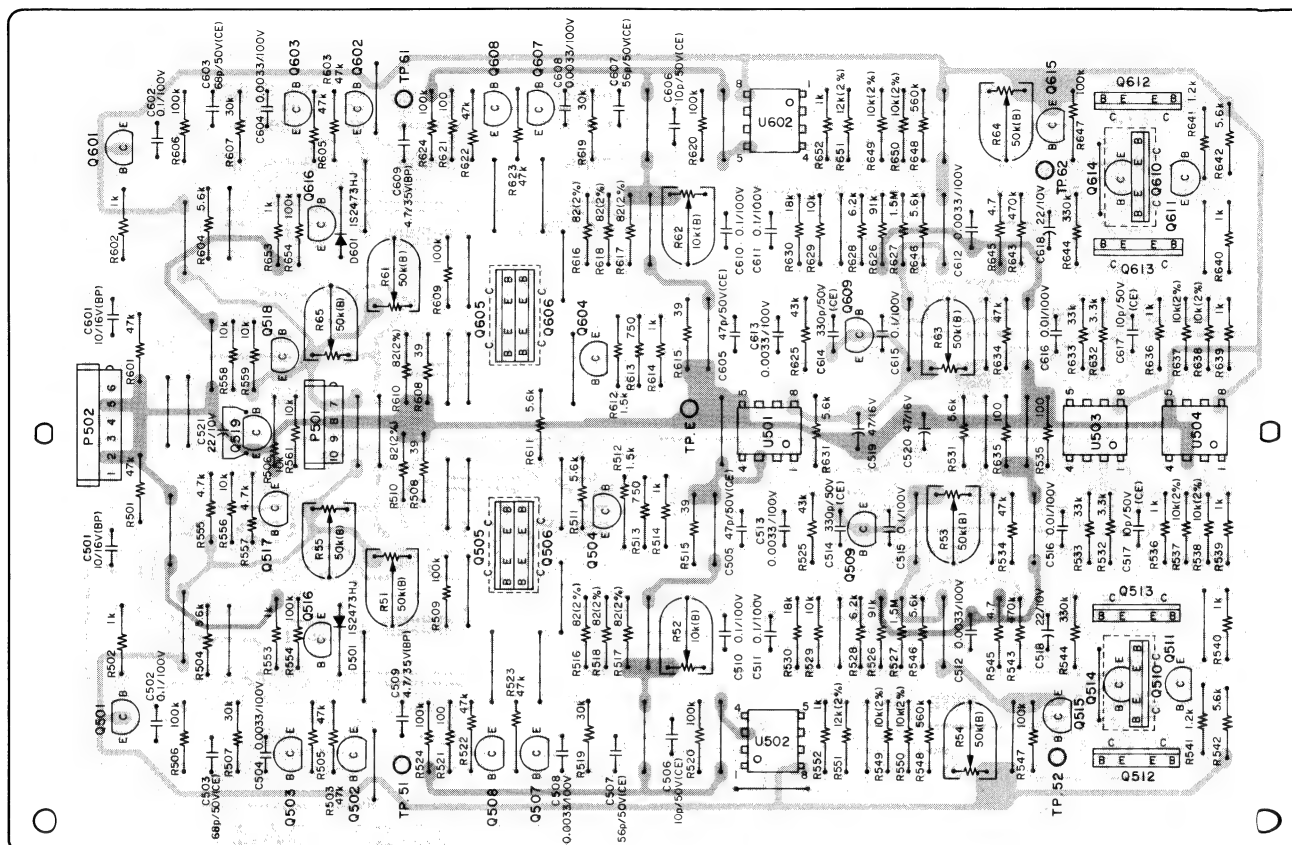
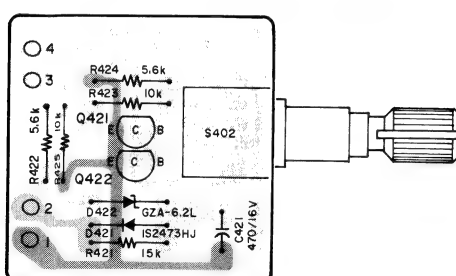


MAIN PCB-106 ASSY (V-3RX)



MAIN PCB-106 ASSY (V-5RX)



DBX PCB-105 ASSY**TIMER PCB-109 ASSY (V-5RX)**

NOTES

1. The colors used on the PCB illustrations have the following significance:

+ : +B power supply circuit

 : -B power supply circuit

: GND

Y-axis : Other

2. Resistor values are in ohms ($k=1,000$ ohms, $M=1,000,000$ ohms).

2. Resistor values are in ohms (R = 1,000 ohms, M = 1,000,000 ohms).
3. Capacitor values are in microfarads (p=picofarads).

(LL) : Electrolytic capacitor LL series

(CE) : Ceramic

(SC) : Polystyrene

(PC) : Polyprop.

(BP) : Bipolar

All non-polarized capacitors are $\pm 5\%$ Mylar unless otherwise noted.

4. Parts marked with this sign are safety critical components.

They must always be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

BLOCK REPEAT PCB-101 ASSY (V-3RX)

| REF. NO. | PARTS NO. | DESCRIPTION |
|---|------------------|---------------------------|
| | 5200047501 | PCB-101 Assy |
| | 5210047501 | PCB-101 |
| | IC's | |
| U701 | 5220803200 | μPD554C |
| U702~U705 | 5293000900 | TD62504P Transistor Array |
| | TRANSISTORS | |
| Q701 | Δ 5145087000 | 2SD313E |
| Q702 | 5145091000 | 2SC945AK |
| Q703, Q704 | 5145150000 | 2SA1015GR |
| Q705, Q706 | 5145091000 | 2SC945AK |
| Q707~Q710 | 5145150000 | 2SA1015GR |
| Q711 | 5145091000 | 2SC945AK |
| | DIODES | |
| D701 | 5224518100 | Zener RD11EB2 |
| D702, D703 | 5224518000 | Zener RD8.2EB3 |
| D704, D705 | 5143118000 | 1S2473HJ |
| D706 | 5143129000 | Zener RD5.6EB |
| D708~D727 | 5143118000 | 1S2473HJ |
| | CARBON RESISTORS | |
| All resistors are rated ±5% tolerance and ¼ watt. | | |
| R701, R702 | 5183078000 | 680Ω |
| R703 | 5183074000 | 470Ω |
| R704 | 5183106000 | 10kΩ |
| R705 | 5183130000 | 100kΩ |
| R706 | 5183118000 | 33kΩ |
| R707~R711 | 5183114000 | 22kΩ |
| R712~R715 | 5183106000 | 10kΩ |
| R716, R717 | 5183130000 | 100kΩ |
| R718, R719 | 5183106000 | 10kΩ |
| R720 | 5183070000 | 330Ω |
| R721, R722 | 5183082000 | 1kΩ |
| R723 | 5183114000 | 22kΩ |
| R724~R740 | 5183106000 | 10kΩ |
| R741~R745 | 5183114000 | 22kΩ |
| R746 | 5183130000 | 100kΩ |
| R747~R754 | 5183106000 | 10kΩ |
| R755 | 5183082000 | 1kΩ |
| R756~R762 | 5183078000 | 680Ω |
| R763 | 5183094000 | 3.3kΩ |
| R764 | 5183086000 | 1.5kΩ |
| | CAPACITORS | |
| C701 | 5173037000 | Elec. 47μF 25V |
| C702 | 5173054000 | Elec. 220μF 16V |
| C703 | 5173395000 | Elec. 0.047μF 50V 10% |
| C704 | 5173010000 | Elec. 10μF 16V |
| C705, C706 | 5172792000 | Polyst. 33pF 50V 5% |
| C707, C708 | 5170433000 | Mylar 0.022μF 100V 5% |
| C709 | 5173036000 | Elec. 47μF 16V |
| C710 | 5172992000 | Elec. 1μF 50V |
| C711~C714 | 5172336000 | Ceramic 0.01μF 50V 10% |
| | COIL | |
| L701 | 5286002100 | Choke 1.5mH |

| REF. NO. | PARTS NO. | DESCRIPTION |
|------------|---------------|---------------------|
| | CONNECTORS | |
| P701 | 5336088300 | Socket, 3P |
| P702 | 5336088400 | Socket, 4P |
| P703 | 5336088500 | Socket, 5P |
| P704 | 5336088400 | Socket, 4P |
| P705 | 5336088500 | Socket, 5P |
| P706 | 5336088300 | Socket, 3P |
| P707, P708 | 5336088400 | Socket, 4P |
| P709 | 5336088300 | Socket, 3P |
| | MISCELLANEOUS | |
| | 5800004000 | Bracket, Transistor |
| | 5033295000 | Tube, Insulating |
| | 5033291000 | Plate, Insulating |

MAIN PCB-106 ASSY

| REF. NO. | PARTS NO. | DESCRIPTION |
|------------|-------------|---|
| | 5200048001 | PCB-106 Assy [J, US, C, GE, A, L] (V-3RX) |
| | 5200048010 | PCB-106 Assy [E, UK] (V-3RX) |
| | 5200046703 | PCB-106 Assy [J, US, C, GE, A, L] (V-5RX) |
| | 5200046710 | PCB-106 Assy [E, UK] (V-5RX) |
| | 5210046700 | PCB-106 |
| | IC's | |
| U101 | 5147062000 | LA3161 |
| U102, U202 | 5220411400 | LM1111CN |
| U104 | 5220405000 | μPC4557C |
| U301 | 5147047000 | M54410P |
| U306 | 5220405000 | μPC4557C |
| | TRANSISTORS | |
| Q101, Q201 | 5042486000 | 2SC536G |
| Q102, Q202 | 5042486000 | 2SC536G |
| Q103, Q203 | 5230775000 | 2SC2878B |
| Q104, Q204 | 5145119000 | 2SC1844F |
| Q105, Q205 | 5145102000 | FET 2SK68L |
| Q106, Q206 | 5042486000 | 2SC536G |
| Q107, Q207 | 5042486000 | 2SC536G |
| Q108, Q208 | 5042486000 | 2SC536G |
| Q109, Q209 | 5042486000 | 2SC536G |
| Q110 | 5145099000 | 2SC1741R |
| Q111, Q211 | 5042486000 | 2SC536G |
| Q112, Q212 | 5230775000 | 2SC2878B |
| Q301~Q303 | 5145091000 | 2SC945AK |
| Q304 | 5145150000 | 2SA1015GR |
| Q305 | 5145091000 | 2SC945AK |
| Q306 | 5230773800 | 2SC2655Y |
| Q307 | 5145099000 | 2SC1741R (V-3RX) |
| | 5145091000 | 2SC945AK (V-5RX) |
| Q308~Q315 | 5145091000 | 2SC945AK |
| Q316 | 5145150000 | 2SA1015GR |
| Q317~Q325 | 5145091000 | 2SC945AK |
| Q326 | 5230773800 | 2SC2655Y |
| Q327 | 5230014000 | 2SA1020Y |

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

| REF. NO. | PARTS NO. | DESCRIPTION |
|--|-------------|-------------------|
| Q328 | 5145150000 | 2SA1015GR (V-5RX) |
| Q329~Q333 | 5145091000 | 2SC945AK (V-5RX) |
| Q334~Q336 | 5145091000 | 2SC945AK |
| Q337 | 5230773800 | 2SC2655Y |
| Q338 | 5230014000 | 2SA1020Y |
| Q339 | △5145087000 | 2SD313E |
| Q340, Q341 | 5145091000 | 2SC945AK |
| Q342 | △5145129000 | 2SB507E |
| Q343, Q344 | 5145150000 | 2SA1015GR |
| DIODES | | |
| D101, D201 | 5143118000 | 1S2473HJ |
| D102, D202 | 5143118000 | 1S2473HJ |
| D103, D203 | 5143118000 | 1S2473HJ |
| D301~D303 | 5143118000 | 1S2473HJ |
| D304 | 5224519600 | Zener GZA5.6U |
| D305~D310 | 5143118000 | 1S2473HJ |
| D311, D312 | 5224012800 | 0A90R |
| D313~D315 | 5143118000 | 1S2473HJ |
| D316, D317 | 5224521000 | Zener GZA11U |
| D318, D319 | 5224014000 | 1R5BZ61 |
| D320~D324 | 5143118000 | 1S2473HJ (V-5RX) |
| D325~D330 | 5143118000 | 1S2473HJ |
| D331 | △5224013600 | DBA10C |
| D332 | △5228005000 | W02 |
| D333 | 5224013600 | DBA10C |
| D334, D335 | △5143315000 | W03C |
| D336 | 5224519700 | Zener GZA6.2L |
| CARBON RESISTORS | | |
| All resistors are rated ±5% tolerance and ¼ watt unless otherwise noted. | | |
| R101, R201 | 5183077000 | 620Ω |
| R102, R202 | 5183126000 | 68kΩ |
| R103, R203 | 5183052000 | 56Ω |
| R104, R204 | 5183132000 | 120kΩ |
| R105, R205 | 5183097000 | 4.3kΩ |
| R106, R206 | 5183116000 | 27kΩ |
| R107, R207 | 5183090000 | 2.2kΩ |
| R108, R208 | 5183094000 | 3.3kΩ |
| R109, R209 | 5183132000 | 120kΩ |
| R110 | 5183074000 | 470Ω |
| R111, R211 | 5183106000 | 10kΩ |
| R112, R212 | 5183106000 | 10kΩ |
| R113, R213 | 5183118000 | 33kΩ |
| R114, R214 | 5183118000 | 33kΩ |
| R115, R215 | 5183118000 | 33kΩ |
| R116, R216 | 5183122000 | 47kΩ |
| R117, R217 | 5183094000 | 3.3kΩ |
| R118, R218 | 5183134000 | 150kΩ |
| R119, R219 | 5183142000 | 330kΩ |
| R120, R220 | 5183140000 | 270kΩ |
| R121, R221 | 5183090000 | 2.2kΩ |
| R122, R222 | 5183138000 | 220kΩ |
| R123, R223 | 5183138000 | 220kΩ |
| R124, R224 | 5183090000 | 2.2kΩ |
| R125, R225 | 5183046000 | 33Ω |
| R126, R226 | 5183106000 | 10kΩ |
| R127, R227 | 5183082000 | 1kΩ |
| R128, R228 | 5183090000 | 2.2kΩ |
| R129, R229 | 5183110000 | 15kΩ |
| R130, R230 | 5183106000 | 10kΩ |

| REF. NO. | PARTS NO. | DESCRIPTION |
|------------|-------------|-------------------|
| R131, R231 | 5183132000 | 120kΩ |
| R132, R232 | 5183126000 | 68kΩ |
| R133, R233 | 5183132000 | 120kΩ |
| R134, R234 | 5183106000 | 10kΩ |
| R135, R235 | 5183132000 | 120kΩ |
| R136, R236 | 5183064000 | 180Ω |
| R137, R237 | 5183050000 | 47Ω |
| R138, R238 | 5183162000 | 2.2MΩ |
| R139, R239 | 5183108000 | 12kΩ |
| R140, R240 | 5183132000 | 120kΩ |
| R141 | 5183082000 | 1kΩ |
| R142, R242 | 5183094000 | 3.3kΩ |
| R143, R243 | 5183120000 | 39kΩ |
| R144, R244 | 5183134000 | 150kΩ |
| R145, R245 | 5183094000 | 3.3kΩ |
| R146, R246 | 5183098000 | 4.7kΩ |
| R147, R247 | 5183096000 | 3.9kΩ (V-3RX) |
| | 5183098000 | 4.7kΩ (V-5RX) |
| R148, R248 | 5183102000 | 6.8kΩ (V-3RX) |
| | 5183104000 | 8.2kΩ (V-5RX) |
| R149, R249 | 5183118000 | 33kΩ |
| R150, R250 | 5183148000 | 560Ω |
| R151, R251 | 5183084000 | 1.2kΩ |
| R152, R252 | 5183050000 | 47Ω |
| R153, R253 | 5183114000 | 22kΩ |
| R154, R254 | 5183132000 | 120kΩ |
| R155, R255 | 5183082000 | 1kΩ (V-3RX) |
| | 5183050000 | 47Ω (V-5RX) |
| R156, R256 | 5183132000 | 120kΩ |
| R157, R257 | 5183100000 | 5.6kΩ |
| R158, R258 | 5183106000 | 10kΩ |
| R159, R259 | 5183106000 | 10kΩ |
| R160, R260 | 5183106000 | 10kΩ |
| R161 | △5184249000 | 100Ω Nonflammable |
| R162 | △5184249000 | 100Ω Nonflammable |
| R163 | 5183122000 | 47kΩ |
| R164 | 5183030000 | 6.8Ω |
| R165 | 5183106000 | 10kΩ |
| R166 | 5183082000 | 1kΩ |
| R167, R267 | 5183114000 | 22kΩ |
| R168, R268 | 5183142000 | 330kΩ |
| R169, R269 | 5183062000 | 150Ω |
| R170, R270 | 5183096000 | 3.9kΩ |
| R171, R271 | 5183114000 | 22kΩ |
| R172, R272 | 5183146000 | 470kΩ |
| R173, R273 | 5183104000 | 8.2kΩ |
| R174 | △5184249000 | 100Ω Nonflammable |
| R301 | 5183106000 | 10kΩ |
| R302 | 5183098000 | 4.7kΩ |
| R303 | 5183114000 | 22kΩ |
| R304 | 5183106000 | 10kΩ |
| R305, R306 | 5183098000 | 4.7kΩ |
| R307 | 5183106000 | 10kΩ |
| R308 | 5183114000 | 22kΩ |
| R309, R310 | 5183108000 | 12kΩ |
| R311 | 5183082000 | 1kΩ |
| R312 | 5183114000 | 22kΩ |
| R313 | 5183042000 | 22Ω (V-3RX) |
| | 5183050000 | 47Ω (V-5RX) |
| R314 | 5183064000 | 180Ω |
| R315 | 5183100000 | 5.6kΩ (V-3RX) |
| | 5183106000 | 10kΩ (V-5RX) |

| REF. NO. | PARTS NO. | DESCRIPTION | |
|------------|------------|---------------|---------|
| R316 | 5183106000 | 10k Ω | (V-3RX) |
| | 5183114000 | 22k Ω | (V-5RX) |
| R317, R318 | 5183100000 | 5.6k Ω | |
| R319 | 5183106000 | 10k Ω | |
| R320~R322 | 5183100000 | 5.6k Ω | |
| R323 | 5183106000 | 10k Ω | |
| R324 | 5183050000 | 47 Ω | |
| R325 | 5183118000 | 33k Ω | |
| R326 | 5183076000 | 560 Ω | |
| R327, R328 | 5183114000 | 22k Ω | |
| R329 | 5183076000 | 560 Ω | |
| R330 | 5183122000 | 47k Ω | |
| R331 | 5183114000 | 22k Ω | |
| R332 | 5183122000 | 47k Ω | |
| R333, R334 | 5183106000 | 10k Ω | |
| R335 | 5181763000 | Jumper | (V-3RX) |
| | 5183046000 | 33 Ω | (V-5RX) |
| R336 | 5183106000 | 10k Ω | |
| R337, R338 | 5183100000 | 5.6k Ω | |
| R339 | 5185091000 | 910 Ω | 2% |
| R340 | 5183106000 | 10k Ω | |
| R341 | 5183106000 | 10k Ω | |
| R342 | 5185096000 | 1.5k Ω | 2% |
| R343 | 5183106000 | 10k Ω | |
| R344 | 5185100000 | 2.2k Ω | 2% |
| R345, R346 | 5183100000 | 5.6k Ω | |
| R347 | 5185108000 | 4.7k Ω | 2% |
| R348, R349 | 5183100000 | 5.6k Ω | |
| R350 | 5185114000 | 8.2k Ω | 2% |
| R351, R352 | 5183106000 | 10k Ω | |
| R353 | 5185110000 | 5.6k Ω | 2% |
| R354~R356 | 5183070000 | 330 Ω | |
| R357 | 5183144000 | 390k Ω | |
| R358, R359 | 5183070000 | 330 Ω | |
| R360~R362 | 5183090000 | 2.2k Ω | |
| R363 | 5183112000 | 18k Ω | (V-5RX) |
| R364 | 5183094000 | 3.3k Ω | (V-5RX) |
| R365 | 5183108000 | 12k Ω | (V-5RX) |
| R366 | 5183114000 | 22k Ω | |
| R367 | 5183082000 | 1k Ω | (V-5RX) |
| R368 | 5183114000 | 22k Ω | (V-5RX) |
| R369 | 5183100000 | 5.6k Ω | (V-5RX) |
| R370 | 5183114000 | 22k Ω | (V-5RX) |
| R371 | 5183064000 | 180 Ω | (V-5RX) |
| R372 | 5183108000 | 12k Ω | (V-5RX) |
| R373, R374 | 5183122000 | 47k Ω | (V-5RX) |
| R375 | 5183132000 | 120k Ω | (V-5RX) |
| R376 | 5183064000 | 180 Ω | (V-5RX) |
| R377 | 5183114000 | 22k Ω | (V-5RX) |
| R378 | 5183106000 | 10k Ω | (V-5RX) |
| R379, R380 | 5183114000 | 22k Ω | (V-5RX) |
| R381 | 5183106000 | 10k Ω | |
| R382, R383 | 5183100000 | 5.6k Ω | |
| R384 | 5183082000 | 1k Ω | |
| R385 | 5183100000 | 5.6k Ω | |
| R386 | 5183108000 | 12k Ω | |
| R387, R388 | 5183106000 | 10k Ω | |
| R389 | 5183132000 | 120k Ω | |
| R390 | 5183070000 | 330 Ω | |
| R391 | 5183138000 | 220k Ω | |
| R392 | 5183090000 | 2.2k Ω | |

| REF. NO. | PARTS NO. | DESCRIPTION | |
|------------|------------|---------------|------------------------|
| R393 | 5183098000 | 4.7k Ω | |
| R394 | 5183090000 | 2.2k Ω | |
| R395 | 5183084000 | 1.2k Ω | |
| R396 | 5183098000 | 4.7k Ω | |
| R397 | 5183100000 | 5.6k Ω | |
| R398 | 5183106000 | 10k Ω | |
| R399 | 5183090000 | 2.2k Ω | |
| R400 | 5183098000 | 4.7k Ω | |
| R401 | 5183090000 | 2.2k Ω | |
| R402 | 5183106000 | 10k Ω | |
| R403 | 5183146000 | 470k Ω | |
| R404, R405 | 5183046000 | 33 Ω | |
| R406 | 5183028000 | 5.6 Ω | |
| CAPACITORS | | | |
| C101, C201 | 5260221910 | Elec. | 10 μ F 16V |
| C102, C202 | 5172321000 | Celamic | 560pF 50V 10% |
| C103, C203 | 5173053000 | Elec. | 220 μ F 10V |
| C104, C204 | 5172312000 | Celamic | 100pF 50V 10% |
| C105, C205 | 5170435000 | Mylar | 0.027 μ F 100V 5% |
| C106, C206 | 5170431000 | Mylar | 0.018 μ F 100V 5% |
| C107, C207 | 5260221310 | Elec. | 2.2 μ F 50V |
| C108 | 5173045000 | Elec. | 100 μ F 16V |
| C109, C209 | 5260221110 | Elec. | 1 μ F 50V |
| C110, C210 | 5173733000 | Polypro. | 0.0012 μ F 100V 5% |
| C111, C211 | 5173735000 | Polypro. | 0.0018 μ F 100V 5% |
| C112, C212 | 5172324000 | Celamic | 0.001 μ F 50V 10% |
| C113, C213 | 5173010000 | Elec. | 10 μ F 16V |
| C114, C214 | 5172324000 | Celamic | 0.001 μ F 50V 10% |
| C115, C215 | 5173010000 | Elec. | 10 μ F 16V |
| C116, C216 | 5170437000 | Mylar | 0.033 μ F 100V 5% |
| C117, C217 | 5170417000 | Mylar | 0.0047 μ F 100V 5% |
| C118, C218 | 5173010000 | Elec. | 10 μ F 16V |
| C119, C219 | 5173053000 | Elec. | 220 μ F 10V |
| C120, C220 | 5172324000 | Ceramic | 0.001 μ F 50V 10% |
| C121, C221 | 5170441000 | Mylar | 0.047 μ F 100V 5% |
| C122, C222 | 5173010000 | Elec. | 10 μ F 16V |
| C123, C223 | 5170519000 | Mylar | 0.1 μ F 100V 10% |
| C124, C224 | 5260220810 | Elec. | 0.33 μ F 50V |
| C125, C225 | 5260065610 | Elec. | 1 μ F 50V BP |
| C126 | 5172992000 | Elec. | 1 μ F 50V |
| C127 | 5172992000 | Elec. | 1 μ F 50V |
| C128, C228 | 5260221910 | Elec. | 10 μ F 16V |
| C129, C229 | 5172312000 | Ceramic | 100pF 50V 10% |
| C130, C230 | 5260066510 | Elec. | 4.7 μ F 35V BP |
| C131 | 5173045000 | Elec. | 100 μ F 16V |
| C132, C232 | 5173053000 | Elec. | 220 μ F 10V |
| C133, C233 | 5260220910 | Elec. | 0.47 μ F 50V |
| C134, C234 | 5173010000 | Elec. | 10 μ F 16V |
| C135, C235 | 5260065610 | Elec. | 1 μ F 50V BP |
| C136, C236 | 5170433000 | Mylar | 0.022 μ F 100V 5% |
| C137, C237 | 5170431000 | Mylar | 0.018 μ F 100V 5% |
| | 5170425000 | Mylar | 0.01 μ F 100V 5% |
| | | | (V-3RX) |
| | | | (V-5RX) |
| C138, C238 | 5170433000 | Mylar | 0.022 μ F 100V 5% |
| C139 | 5173045000 | Elec. | 100 μ F 16V |
| C140 | 5173045000 | Elec. | 100 μ F 16V |
| C142 | 5172992000 | Elec. | 1 μ F 50V |
| C143, C243 | 5172992000 | Elec. | 1 μ F 50V |

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------------|--------------|---------------------------------|
| C144, C244 | 5260220510 | Elec. 0.1μF 50V |
| C145, C245 | 5173027000 | Elec. 33μF 16V |
| C146 | 5173045000 | Elec. 100μF 16V |
| C147 | 5172992000 | Elec. 1μF 50V |
| C148, C248 | 5172314000 | Ceramic 150pF 50V 10% (V-5RX) |
| C301 | 5173035000 | Elec. 47μF 10V |
| C302 | 5173010000 | Elec. 10μF 16V |
| C303 | 5173035000 | Elec. 47μF 10V |
| C304, C305 | 5173018000 | Elec. 22μF 16V |
| C306~C310 | 5172336000 | Ceramic 0.01μF 50V 10% |
| C311 | 5172336000 | Ceramic 0.01μF 50V 10% (V-3RX) |
| | 5173010000 | Elec. 10μF 16V (V-5RX) |
| C312 | 5172336000 | Ceramic 0.01μF 50V 10% |
| C313 | 5173072000 | Elec. 470μF 16V |
| C314 | 5262001110 | Elec. 4700μF 25V |
| C315 | 5172336000 | Ceramic 0.01μF 50V 10% (V-3RX) |
| C316 | 5170401000 | Mylar 0.001μF 100V 5% |
| C317 | 5172336000 | Ceramic 0.01μF 50V 10% |
| C318 | 5260065800 | Elec. 2.2μF 50V BP |
| C319 | 5173072000 | Elec. 470μF 16V |
| C320 | 5262001110 | Elec. 4700μF 25V |
| C321 | 5172336000 | Ceramic 0.01μF 50V 10% |
| C322 | 5173037000 | Elec. 47μF 25V (V-5RX) |
| C323 | 5173046000 | Elec. 100μF 25V (V5RX) |
| C324 | 5173071000 | Elec. 470μF 10V (V-5RX) |
| C325 | 5172324000 | Ceramic 0.001μF 50V 10% (V-5RX) |
| C326 | 5173027000 | Elec. 33μF 16V (V-5RX) |
| C327 | 5173044000 | Elec. 100μF 10V (V-5RX) |
| C328 | 5173010000 | Elec. 10μF 16V (V-5RX) |
| C329, C330 | 5173010000 | Elec. 10μF 16V |
| C331 | 5173017000 | Elec. 22μF 10V |
| C332, C333 | 5172992000 | Elec. 1μF 50V |
| C334 | 5170429000 | Mylar 0.015μF 100V 5% |
| C335 | 5260065810 | Elec. 2.2μF 50V BP |
| C336 | 5172336000 | Ceramic 0.01μF 50V 10% |
| C337 | Δ 5173082000 | Elec. 1000μF 25V |
| C338 | 5173046000 | Elec. 100μF 25V |
| C339 | 5172992000 | Elec. 1μF 50V |
| C340 | 5173036000 | Elec. 47μF 16V |
| C341 | Δ 5173082000 | Elec. 1000μF 25V |
| C342 | 5173046000 | Elec. 100μF 25V |
| C343 | 5172992000 | Elec. 1μF 50V |
| C344 | 5173036000 | Elec. 47μF 16V |
| C345, C346 | Δ 5173082000 | Elec. 1000μF 25V |
| C347, C348 | 5172336000 | Ceramic 0.01μF 50V 10% |
| C349 | 5173071000 | Elec. 470μF 10V |
| C350 | 5172336000 | Ceramic 0.01μF 50V 10% |
| VARIABLE RESISTORS | | |
| R11, R21 | 5280003602 | Semi-fixed 20kΩ(B) |
| R12, R22 | 5280003602 | Semi-fixed 20kΩ(B) |
| R13 | 5280004002 | Semi-fixed 50kΩ(B) |

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------------|------------|--------------------------------|
| R14 | 5280004002 | Semi-fixed 50kΩ(B) |
| R15, R25 | 5280004002 | Semi-fixed 50kΩ(B) |
| R31~R33 | 5280004002 | Semi-fixed 50kΩ(B) |
| TRIMMER CAPACITORS | | |
| C141, C241 | 5267205300 | 30pF — 210pF |
| COILS | | |
| L101, L201 | 5286000100 | Choke 4.2mH(Variable) |
| L102 | 5160151000 | Choke 1.2mH(Fixed) |
| SWITCHES | | |
| S101 | 5131043000 | Slide 9-2 |
| S102 | 5300022500 | Push |
| S103 | 5300022400 | Push, 3-gang; S |
| S104 | 5300022300 | Push, 3-gang; N |
| S301~S307 | 5302100500 | Tact |
| MISCELLANEOUS | | |
| U103, U203 | 5292802600 | Filter, Low-pass |
| U105 | 5292200900 | OSC Unit, 100kHz |
| U106, U206 | 5286000200 | Trap Coil, 100kHz |
| U302 | 5293000300 | Resistor Array |
| U303 | 5293000400 | Resistor Array |
| U304 | 5293000500 | Resistor Array |
| U305 | 5293000800 | Resistor Array |
| P101 | 5122130000 | Connector Plug, 6P (WHT) |
| P102 | 5122126000 | Connector Plug, 2P (WHT) |
| P301 | 5122131000 | Connector Plug, 7P (WHT) |
| P302 | 5122127000 | Connector Plug, 3P (WHT) |
| P303 | 5122126000 | Connector Plug, 2P (WHT) |
| F1~F5 | 5041138000 | Fuse, T500mA 250V [E, UK] |
| | 5142087000 | Holder, Fuse (10 used) [E, UK] |
| | 5553132000 | Heatsink |
| | 5330007700 | Jack, MIC |
| | 5330007800 | Jack, PHONES |
| | 5555590000 | Plate, GND; A |

DBX PCB-105 ASSY

| REF. NO. | PARTS NO. | DESCRIPTION |
|--------------------|------------|----------------|
| | 5200046100 | PCB-105 Assy |
| | 5210046100 | PCB-105 |
| IC's | | |
| U501 | 5220407100 | TL082CP |
| U502, U602 | 5220406700 | RC4558P |
| U503 | 5220407100 | TL082CP |
| U504 | 5220406700 | RC4558P |
| TRANSISTORS | | |
| Q501, Q601 | 5145151000 | 2SC1815GR |
| Q502, Q602 | 5230775000 | 2SC2878B |
| Q503, Q603 | 5230775000 | 2SC2878B |
| Q504, Q604 | 5145151000 | 2SC1815GR |
| Q505, Q605 | 5232250300 | μPA75VF (Pair) |

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

| REF. NO. | PARTS NO. | DESCRIPTION |
|--|------------|---------------------|
| Q506, Q606 | 5232250100 | μ PA74VF (Pair) |
| Q507, Q607 | 5230775000 | 2SC2878B |
| Q508, Q608 | 5230775000 | 2SC2878B |
| Q509, Q609 | 5145151000 | 2SC1815GR |
| Q510, Q610 | 5232250100 | μ PA74VF (Pair) |
| Q511, Q611 | 5145151000 | 2SC1815GR |
| Q512, Q612 | 5232250100 | μ PA74VF |
| Q513, Q613 | 5232250100 | μ PA74VF |
| Q514, Q614 | 5230774300 | 2SC1845F |
| Q515, Q615 | 5145150000 | 2SA1015GR |
| Q516, Q616 | 5145102000 | FET 2SK68AL |
| Q517 | 5145151000 | 2SC1815GR |
| Q518 | 5145150000 | 2SA1015GR |
| Q519 | 5145151000 | 2SC1815GR |
| DIODES | | |
| D501, D601 | 5143118000 | 1S2473HJ |
| CARBON RESISTORS | | |
| All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt unless otherwise noted. | | |
| R501, R601 | 5183122000 | 47k Ω |
| R502, R602 | 5183082000 | 1k Ω |
| R503, R603 | 5183122000 | 47k Ω |
| R504, R604 | 5183100000 | 5.6k Ω |
| R505, R605 | 5183122000 | 47k Ω |
| R506, R606 | 5183130000 | 100k Ω |
| R507, R607 | 5183117000 | 30k Ω |
| R508, R608 | 5183048000 | 39 Ω |
| R509, R609 | 5183130000 | 100k Ω |
| R510, R610 | 5185066000 | 82 Ω 2% |
| R511, R611 | 5183100000 | 5.6k Ω |
| R512, R612 | 5183086000 | 1.5k Ω |
| R513, R613 | 5183079000 | 750 Ω |
| R514, R614 | 5183082000 | 1k Ω |
| R515, R615 | 5183048000 | 39 Ω |
| R516, R616 | 5185066000 | 82 Ω 2% |
| R517, R617 | 5185066000 | 82 Ω 2% |
| R518, R618 | 5185066000 | 82 Ω 2% |
| R519, R619 | 5183117000 | 30k Ω |
| R520, R620 | 5183130000 | 100k Ω |
| R521, R621 | 5183058000 | 100 Ω |
| R522, R622 | 5183122000 | 47k Ω |
| R523, R623 | 5183122000 | 47k Ω |
| R524, R624 | 5183130000 | 100k Ω |
| R525, R625 | 5183121000 | 43k Ω |
| R526, R626 | 5183129000 | 91k Ω |
| R527, R627 | 5183158000 | 1.5M Ω |
| R528, R628 | 5183101000 | 6.2k Ω |
| R529, R629 | 5183106000 | 10k Ω |
| R530, R630 | 5183112000 | 18k Ω |
| R531, R631 | 5183100000 | 5.6k Ω |
| R532, R632 | 5183094000 | 3.3k Ω |
| R533, R633 | 5183118000 | 33k Ω |
| R534, R634 | 5183122000 | 47k Ω |
| R535, R635 | 5183058000 | 100 Ω |
| R536, R636 | 5183082000 | 1k Ω |
| R537, R637 | 5185116000 | 10k Ω |
| R538, R638 | 5185116000 | 10k Ω |
| R539, R639 | 5183082000 | 1k Ω |
| R540, R640 | 5183082000 | 1k Ω |

| REF. NO. | PARTS NO. | DESCRIPTION |
|---------------------------|------------|------------------------------|
| R541, R641 | 5183084000 | 1.2k Ω |
| R542, R642 | 5183100000 | 5.6k Ω |
| R543, R643 | 5183146000 | 470k Ω |
| R544, R644 | 5183142000 | 330k Ω |
| R545, R645 | 5183026000 | 4.7 Ω |
| R546, R646 | 5183100000 | 5.6k Ω |
| R547, R647 | 5183130000 | 100k Ω |
| R548, R648 | 5183148000 | 560k Ω |
| R549, R649 | 5185116000 | 10k Ω |
| R550, R650 | 5185116000 | 10k Ω |
| R551, R651 | 5185118000 | 12k Ω |
| R552, R652 | 5183082000 | 1k Ω |
| R553, R653 | 5183082000 | 1k Ω |
| R554, R654 | 5183130000 | 100k Ω |
| R555 | 5183098000 | 4.7k Ω |
| R556 | 5183106000 | 10k Ω |
| R557 | 5183098000 | 4.7k Ω |
| R558 | 5183106000 | 10k Ω |
| R559 | 5183106000 | 10k Ω |
| R560 | 5183106000 | 10k Ω |
| R561 | 5183106000 | 10k Ω |
| CAPACITORS | | |
| C501, C601 | 5260067010 | Elec. 10 μ F 16V BP |
| C502, C602 | 5263162213 | Meta. 0.1 μ F 50V 5% |
| C503, C603 | 5172310000 | Ceramic 68pF 50V 10% |
| C504, C604 | 5170413000 | Mylar 0.0033 μ F 100V 5% |
| C505, C605 | 5172308000 | Ceramic 47pF 50V 10% |
| C506, C606 | 5172300000 | Ceramic 10pF 50V 10% |
| C507, C607 | 5172309000 | Ceramic 56pF 50V 10% |
| C508, C608 | 5170413000 | Mylar 0.0033 μ F 100V 5% |
| C509, C609 | 5260066510 | Elec. 4.7 μ F 35V BP |
| C510, C610 | 5263162200 | Meta. 0.1 μ F 50V 5% |
| C511, C611 | 5263162213 | Meta. 0.1 μ F 50V 5% |
| C512, C612 | 5170413000 | Mylar 0.0033 μ F 100V 5% |
| C513, C613 | 5170413000 | Mylar 0.0033 μ F 100V 5% |
| C514, C614 | 5172318000 | Ceramic 330pF 50V 10% |
| C515, C615 | 5263162213 | Meta. 0.1 μ F 50V 5% |
| C516, C616 | 5170425000 | Mylar 0.01 μ F 100V 5% |
| C517, C617 | 5172300000 | Ceramic 10pF 50V 10% |
| C518, C618 | 5260227510 | Elec. 22 μ F 10V |
| C519 | 5173036000 | Elec. 47 μ F 16V |
| C520 | 5173036000 | Elec. 47 μ F 16V |
| C521 | 5173017000 | Elec. 22 μ F 10V |
| VARIABLE RESISTORS | | |
| R51, R61 | 5150094000 | Semi-fixed 50k Ω (B) |
| R52, R62 | 5150092000 | Semi-fixed 10k Ω (B) |
| R53, R63 | 5150094000 | Semi-fixed 50k Ω (B) |
| R54, R64 | 5150094000 | Semi-fixed 50k Ω (B) |
| R55, R65 | 5150094000 | Semi-fixed 50k Ω (B) |
| MISCELLANEOUS | | |
| P501 | 5336088400 | Connector Socket, 4P |
| P502 | 5336088600 | Connector Socket, 6P |
| | 5800140700 | Clip, Transistor |
| | 5544750000 | Pin, TP |

LED PCB-144 ASSY

| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------|------------|-----------------------------------|
| | 5200046900 | PCB-144 Assy |
| | 5210046900 | PCB-144 |
| D431~D433 | 5225007300 | LED SLP160C |
| R431~R433 | 5183084000 | Carbon Res. 1.2k Ω 1/4W 5% |
| | 5122403000 | Pin, Connecting |
| | 5800158300 | Holder, LED |

TIMER PCB-109 ASSY (V-5RX)

| REF. NO. | PARTS NO. | DESCRIPTION |
|---|------------|-----------------------|
| | 5200047900 | PCB-109 Assy |
| | 5210047900 | PCB-109 |
| TRANSISTORS | | |
| Q421, Q422 | 5145091000 | 2SC945AK |
| DIODES | | |
| D421 | 5143118000 | 1S2473HJ |
| D422 | 5224519700 | Zener GZA6.2L |
| CARBON RESISTORS | | |
| All resistors are rated $\pm 5\%$ tolerance and 1/4 watt. | | |
| R421 | 5183110000 | 15k Ω |
| R422 | 5183100000 | 5.6k Ω |
| R423 | 5183106000 | 10k Ω |
| R424 | 5183100000 | 5.6k Ω |
| R425 | 5183106000 | 10k Ω |
| CAPACITOR | | |
| C421 | 5173071000 | Elec. 470 μ F 10V |
| S402 | 5301202800 | Switch, Rotary; 2-3 |

TIMER PCB-110 ASSY (V-3RX) (PC Board Omitted.)

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|---------------------|
| | 5200047600 | PCB-110 Assy |
| | 5210047600 | PCB-110 |
| | 5301202800 | Switch, Rotary; 2-3 |

COUNTER PCB-102 ASSY (V-3RX) (PC Board Omitted.)

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|----------------|
| | 5200047300 | PCB-102 Assy |
| | 5210047300 | PCB-102 |
| | 5225007400 | LED SL-1405-20 |
| | 6051083000 | Switch, Tact |

VOLUME PCB-127 (PC Board Omitted.)

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|---------------|
| | 5200046800 | PCB-127 Assy |
| | 5210046800 | PCB-127 |
| R16 | 5283503002 | Var. Resistor |

SW PCB-172 ASSY (V-3RX) (PC Board Omitted.)

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|---------------------|
| | 5200047700 | PCB-172 Assy |
| | 5210047700 | PCB-172 |
| | 5301202800 | Switch, Rotary; 2-3 |

**VOLTAGE SELECTOR PCB-103 ASSY [E, L]
(PC Board Omitted.)**

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|--------------------|
| | 5200047100 | PCB-103 Assy |
| | 5210047100 | PCB-103 |
| | 5555062000 | Plate, Selector; A |

SENSOR PCB-109 ASSY (V-3RX) (PC Board Omitted.)

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|--------------|
| | 5200047801 | PCB-109 Assy |
| | 5210047800 | PCB-109 |
| E1, E2 | 5228700200 | IC TL170C |

REED SW PCB-171 ASSY (V-5RX) (PC Board Omitted.)

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|-----------------|
| | 5200047200 | PCB-171 Assy |
| | 5210047200 | PCB-171 |
| S403 | 5138006000 | Switch, Reed |
| | 5800156900 | Cushion, Rubber |

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

ASSEMBLING HARDWARE CODING LIST

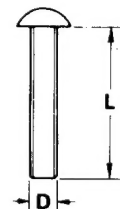
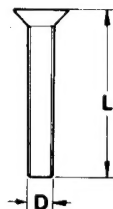
All screws conform to ISO standards, and have crossrecessed heads, unless otherwise noted.
ISO screws have the head inscribed with a point as in the figure to the right.



FOR EXAMPLE:

B M 3 x 6

----- Length in mm (L)
----- Diameter in mm (D) *
----- Metric System
----- Nomenclature



* Inner dia. for washers and nuts

| | Code | Name | Type | | Code | Name | Type |
|---------------|------------|---------------------------------|------|---------------|------------|-------------------------------------|------|
| MACHINE SCREW | R | Round Head Screw | | TAPPING SCREW | BTA | Binding Head Tapping Screw(A Type) | |
| | P | Pan Head Screw | | | BTB | Binding Head Tapping Screw(B Type) | |
| | T | Stove Head Screw (Truss) | | | RTA | Round Head Tapping Screw(A Type) | |
| | B | Binding Head Screw | | | RTB | Round Head Tapping Screw(B Type) | |
| | F | Flat Countersunk Head Screw | | SETSCREW | SF | Hex Socket Setscrew(Flat Point) | |
| | O | Oval Countersunk Head Screw | | | SC | Hex Socket Setscrew(Cup Point) | |
| WOOD SCREW | RW | Round Head Wood Screw | | | SS | Slotted Socket Setscrew(Flat Point) | |
| TAPTITE SCREW | PTT | Pan Head Taptite Screw | | WASHER | E | E-Ring (Retaining Washer) | |
| | WTT | Washer Head Taptite Screw | | | W | Flat Washer (Plain) | |
| SEMS SCREW | BSA | Binding Head SEMS Screw(A Type) | | | SW | Lock Washer (Spring) | |
| | BSB | Binding Head SEMS Screw(B Type) | | | LWI | Lock Washer (Internal Teeth) | |
| | BSF | Binding Head SEMS Screw(F Type) | | | LWE | Lock Washer (External Teeth) | |
| | PSA | Pan Head SEMS Screw(A Type) | | | TW | Trim Washer (Countersunk) | |
| | PSB | Pan Head SEMS Screw(B Type) | | NUT | N | Hex Nut | |

V-3RX/V-5RX

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